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Traffic Services Study Final Report

Safe Roads, Safe Communities

December 2000

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Traffic Services Study

September 29, 2000

Mr. Kevin Begg,
Director Police Services Division,
PO Box 9285 Stn Prov Govt
Victoria, BC V8W 9J7

Dear Sir:

We have the honour to transmit herewith the final report and recommendations of the Traffic Services Study, undertaken under section 42(a) of the Police Act.

We wish to take this opportunity to express our appreciation to all those who assisted by providing insight and advice, and to the study team for its professionalism and dedication.

Sincerely,

Diana Butler
Steering Committee

Ken Higgins
Steering Committee

Ministry of Attorney General

Police Services Division
Road Safety Initiatives

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Seventh Floor
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BRITISH COLUMBIA

November 7, 2000 200-20/TSC

The Honourable Graeme Bowbrick
Attorney General
Province of British Columbia
Parliament Buildings
Victoria, British Columbia
V8V 1X4

Dear Attorney General:

On November 4, 1999, the former Attorney General Ujjal Dosanjh announced a review, under the Police Act, of province-wide traffic safety programs delivered by BC police agencies.

This was the first provincial review of police-delivered traffic services in British Columbia. Under the guidance of the steering committee of Diana Butler, former mayor and chair of Oak Bay's police board, and Ken Higgins, retired deputy chief of the Vancouver Police Department, the review examined all aspects of police traffic services.

This was a comprehensive review which included an environmental scan, public opinion poll, police survey, consultations with road safety stakeholders, focus groups with police officers and analysis from multiple data sets.

The review is completed and, therefore, as required by section 42(3) of the Police Act, I am pleased to provide to you with the final report entitled "Safe Roads, Safe Communities."

The findings are supported by the information gathered during the review. The recommendations, if implemented, will result in greater efficiency and effectiveness of traffic services delivered by police.

The policing community, the public and road safety stakeholders are keenly interested in road safety and the future direction.

Yours truly,

Kevin Begg
Director
Police Services Division

Attachment

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EXECUTIVE SUMMARY

In 1998, 418 people were killed in motor vehicle crashes in British Columbia and almost 60,000 injured. In contrast, 90 people were victims of homicide that same year. The costs of fatal crashes for that year were approximately $90 million and $1.1 billion for injury crashes. While the financial costs to society are immense, the tragic loss of life and the toll paid by victims and their families is immeasurable.

In an effort to reduce the number of crashes in the province, the Ministry of Attorney General, ICBC, police and stakeholders have worked together since 1995 to increase police enforcement through strategic programs.

In November 1999, the former Attorney General Ujjal Dosanjh announced a review of the delivery of traffic services in response to concerns from the police, Ministry of Attorney General, ICBC and road safety stakeholders over current traffic enforcement effectiveness and efficiency.

In an opinion poll conducted for the study, the public identified traffic as a top policing priority. Yet an environmental scan of traffic services in the province revealed that police traffic resources are being depleted and redirected to meet competing demands on police time.

Police resources need to be more effectively aligned with collision-causing behaviours, based on an analysis of police enforcement activity. Speed is a significant contributing factor in serious-injury and fatal collisions; still, other high-risk behaviours require more focus. Driving without due care and attention, impaired driving and failing to wear a seat-belt are also key contributors to injuries and death on B.C. roads and highways.

Police agencies do not have the necessary resources, including personnel, training and timely, reliable data, to identify the causes of crashes. As a result, the police have had difficulty prioritizing and strategically responding to high-risk traffic safety issues. A community-based, problem-solving and service delivery approach that is fully managed and led by the police is needed. In addition, performance evaluation and accountability of police for traffic safety results needs to be improved.

To address these findings, the study recommends that an independent, police-led enforcement unit be established with a research, evaluation and audit component. Police can ensure traffic service delivery is focused on high-risk collision locations, times and behaviours by using research, timely, reliable data and proven enforcement methods.

Stable multi-year funding must also be established and maintained contingent on specific performance outcomes of local police agencies.

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1. INTRODUCTION

1.1. Mandate

On November 4, 1999, then Attorney General Ujjal Dosanjh announced a review, under the Police Act, of provincewide traffic service delivery. Diana Butler, former Mayor and Chair of Oak Bay's police board, and Ken Higgins, retired Deputy Chief Constable of the Vancouver Police Department, were appointed as the Steering Committee.

> Mandate of the Review:
>
> To undertake a comprehensive review of provincewide traffic services, assess their effectiveness and make recommendations to increase public safety in British Columbia.

1.2. Project Objectives

The objectives of the Traffic Services Study were to:

- assess the efficiency and effectiveness of current traffic services delivery, including photo radar, red-light cameras, enhanced CounterAttack, and the Targeted Traffic Enforcement Partnership (formerly known as Enhanced Speed Corridor Enforcement);
- determine whether the focus is on the right objectives;
- determine whether resources are aligned to meet those objectives;
- identify best practices and opportunities for improvement; and
- develop performance measures.

1.3. Project Scope

The Traffic Services Study was undertaken under section 42(1) of the Police Act, which states that the Director of Police Services may "study, investigate and prepare a report on matters concerning policing, law enforcement, and crime prevention in British Columbia." The study examined the current delivery of traffic services by police agencies, identified opportunities for improvement and made recommendations within police traffic law enforcement. While the broad strategies for improvement are based on a detailed analysis of traffic law enforcement in B.C., it was difficult to measure the effectiveness of specific enforcement programs and activities. Matters related to road engineering, commercial vehicles or vehicle insurance were not examined.

1.4. Methodology

A project team was established, including three police officers (one on a part-time basis) with experience in traffic duties.

The project team's first major task was to develop a comprehensive understanding of the current state of traffic services delivery in B.C. An environmental scan of police resources in the province, including a review of personnel, equipment and training, as well as a review of the activity generated by each agency, was undertaken. A survey of all operational police in the province was conducted to determine their attitudes and perceptions toward traffic law enforcement. Focus group sessions led by Justice Institute facilitators were held at the annual general meeting of the B.C. Association of Chiefs of Police (BCACP) Traffic Safety Committee (TSC) in March 2000. The members of the committee, experienced traffic supervisors from across B.C., were asked about their role in road safety and the impact their work has on community safety.

A research company was contracted to conduct a telephone poll of 803 British Columbians in January 2000 to determine public attitudes and perceptions toward traffic law enforcement and education.

The Steering Committee met with representatives of the B.C. Association of Police Boards, B.C. Automobile Association, B.C. Federation of Police Officers, B.C. Trucking Association, and the Union of B.C. Municipalities to solicit views from these organizations on the effectiveness of traffic services delivery in the province. In addition, the Steering Committee met with the President and CEO of ICBC and the Transportation and Safety Committee of the ICBC Board of Directors.

The project team also reviewed reports on best practices in traffic law enforcement in North America and around the world.

A discussion paper on the study's preliminary findings was produced in mid-July 2000. It was distributed to police and key stakeholders and posted on the Ministry of Attorney General's Web site. The paper invited written submissions from the RCMP, municipal police departments, individual police officers, members of the public, and key road safety stakeholders. Although widely differing opinions were expressed on some issues, some common themes emerged.

Partnerships were developed with the Insurance Corporation of B.C. (ICBC) and the B.C. Injury Research and Prevention Unit (BCIRPU) to assist with research and data analysis. ICBC provided valuable assistance in analysing collision causation, while BCIRPU provided analysis of hospital and mortality data related to motor vehicle traffic injuries.

2. CURRENT SITUATION

2.1. National Priorities

In 1994, the Canadian Council of Motor Transport Administrators (CCMTA)[1] hosted a national symposium that identified a need to evaluate the current state of police traffic services delivery in Canada as part of ongoing strategies to improve highway safety. It was noted that traffic services across Canada were suffering from constrained funding and redirected priorities.

In 1998, the Canadian Association of Chiefs of Police (CACP) Traffic Committee agreed to assess the nature and extent of the diminishing priority being placed on traffic safety by police services. CACP gave the RCMP the lead role in the assessment, and Southern Alberta, "K" Division, was chosen as the pilot location. The pilot study is ongoing.

2.2. Provincial and Municipal Priorities

Each year, B.C.'s Attorney General writes to the Commanding Officer of RCMP "E" Division setting out the province's policing priorities for that year.

In 1998, traffic safety was identified as a policing priority. It was included in "E" Division's 1999/02 business plan because of the "loss of life and the unacceptable social cost of traffic accidents." Attorney General Andrew Petter's recent letter to Assistant Commissioner Beverly Busson, setting out the priorities for 2000/01, identified traffic safety as the fourth among eight priorities.

For independent municipal police departments, Part 5 of the Police Act states that the municipal police board, in consultation with the Chief Constable, must determine the priorities, goals and objectives of each department. The Police Act further states that each year the Chief Constable must report to the municipal police board on the implementation of programs and strategies to achieve these priorities, goals and objectives.

A review of the 13 independent police departments (12 independent and one designated police unit) indicated a varied approach to setting goals and objectives. Some have strategic plans spanning several years (e.g., Esquimalt, Saanich and Vancouver) and others have one-year action plans, visions, priorities or goals and objectives.[2] Departments also differed in how recently the priorities had been documented and kept up to date, as well as how specifically, or generally, the priorities were stated.

In terms of highlighting traffic safety and enforcement as a priority for policing, the response of municipal departments also varied. Some, such as Port Moody, emphasized traffic enforcement as a top-level departmental policing priority, while others, such as New Westminster, identified traffic enforcement at the division/section level as a way to achieve other priorities. Many, including Victoria, Esquimalt and Delta, did not specifically mention traffic safety issues. This may be because the priority statements are extremely general or it may mean that traffic services are considered part of the everyday duties of officers (e.g., Stl'atl'imx Tribal Police).

In June 1997, in an effort to make B.C. roads safer, reduce auto theft and fraud, and keep auto insurance costs down, the provincial government announced a six-point road safety plan. It

[1] CCMTA is a multidisciplinary road safety coalition of agencies responsible for provincial transportation issues.

[2] Documentation for Central Saanich and Nelson could not be located.

included programs, such as intersection safety cameras and enhanced police enforcement, aimed at reducing the social and financial costs associated with motor vehicle crashes, theft and fraud.

2.3. Organizational Structure

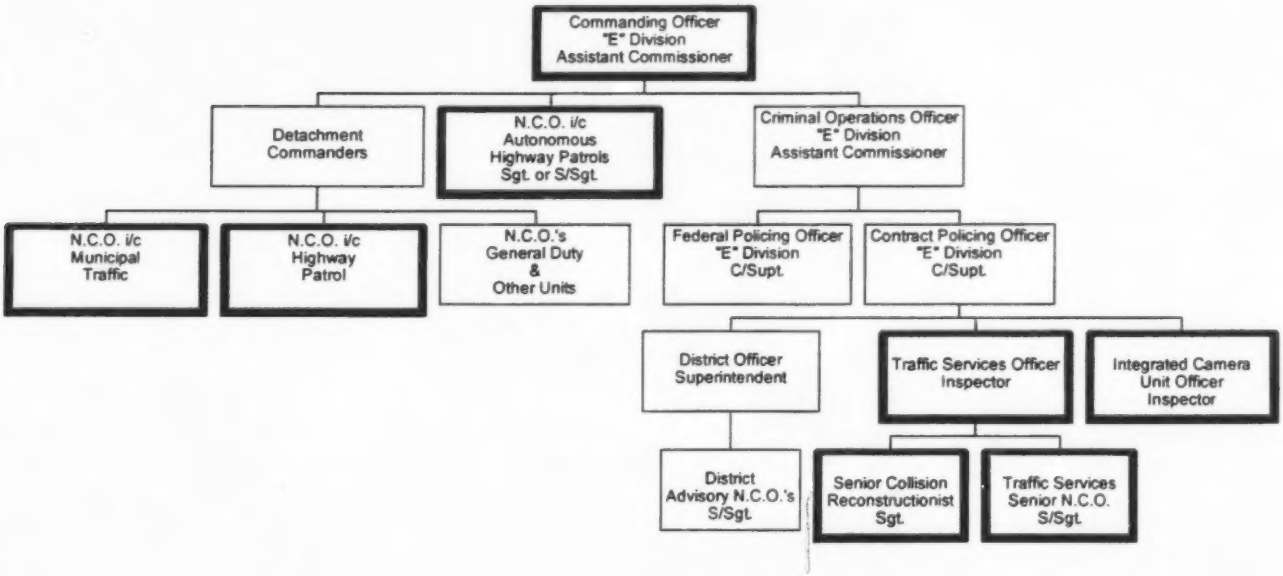
Generally, B.C. policing is provided by the RCMP provincial police, RCMP municipal detachments, independent municipal departments and First Nations police services. Police traffic services are delivered by the provincial and municipal RCMP, the independent police departments and an integrated traffic camera unit (ITCU).

Provincial RCMP detachments provide policing services in municipalities under 5,000 population, as well as to unincorporated areas of the province. Under the Police Act and Municipal Act, when the population of a municipality reaches 5,000 persons according to Canada Census, it must assume responsibility for its police services. These municipalities may form their own independent police department or contract with the RCMP to provide municipal police services.

In 1998, there were 124 provincial RCMP detachments, 59 municipalities with RCMP municipal police services, and 12 independent municipal police departments. Where both municipal and provincial RCMP operate out of the same detachment, the RCMP members from each unit report to one commanding officer to provide the combined provincial and municipal policing areas with police services.

The following diagram, Diagram 1, represents the organizational structure of the RCMP. The highlighted boxes represent traffic positions.

Diagram 1: Current Traffic Services Organizational Chart


Commanding Officer "E" Division Assistant Commissioner
Detachment Commanders
N.C.O. i/c Autonomous Highway Patrols Sgt. or S/Sgt.
Criminal Operations Officer "E" Division Assistant Commissioner
N.C.O. i/c Municipal Traffic
N.C.O. i/c Highway Patrol
N.C.O.'s General Duty & Other Units
Federal Policing Officer "E" Division C/Supt.
Contract Policing Officer "E" Division C/Supt.
District Officer Superintendent
Traffic Services Officer Inspector
Integrated Camera Unit Officer Inspector
District Advisory N.C.O.'s S/Sgt.
Senior Collision Reconstructionist Sgt.
Traffic Services Senior N.C.O. S/Sgt.

Provincial and Municipal RCMP Detachments

The RCMP maintains traffic enforcement units in two principal settings:

- provincial highway patrol units, and
- municipal traffic units.

Seventeen of the 34 provincial highway patrol units operate autonomously under a Non-Commissioned Officer (NCO) who reports directly to the Commanding Officer of "E" Division (CO). The remaining 17 provincial highway patrol units and the municipal traffic units report to a detachment commander, who in turn reports to the CO.

There are four districts each with an advisory NCO, who provides overall guidance and assistance to the detachment commanders on all administrative and operational activities. The advisory NCOs report to their respective District Officers, who report to the CO.

A Traffic Services Officer, who is the program manager for traffic services, and a Traffic Services Senior NCO provide the traffic units with strategic direction based on national, provincial and high-risk priorities. They are also responsible for developing operational and administrative policy and facilitating program service delivery. The Traffic Services Senior NCO reports to the Traffic Services Officer, who in turn reports to the Contract Policing Officer.

Independent Municipal Departments

Seven[3] of the 12 independent municipal police departments maintain traffic enforcement units. In general, an NCO who reports directly to the Chief Constable manages these traffic units.[4] The remaining municipal police departments provide traffic services as part of their patrol duties, but do not have designated traffic units. The municipal police board governs the municipal police department.

The Integrated Traffic Camera Unit

The Integrated Traffic Camera Unit (ITCU) is an integrated police operation of the RCMP and the independent municipal police departments. The ITCU is responsible for B.C.'s photo radar and red-light camera programs. It is managed by an Inspector from the RCMP who acts under the direction of an advisory committee, chaired by the Director of Police Services. This advisory committee sets out the objectives, priorities and goals of the automated camera programs. ITCU Headquarters in Richmond is responsible for operational policy and administration. Four field offices, each headed by an NCO, are responsible for daily operations.

2.4. Resourcing

In 1998, the authorized strength[5] of the provincial and municipal RCMP was 4,287, and the authorized strength of the independent municipal departments was 2,035.

In 1998, there were 707 authorized traffic positions in B.C.:

- 364 positions in 124 RCMP provincial detachments;
- 214 positions in 59 RCMP municipal detachments; and

[3] Abbotsford, Delta, Vancouver, New Westminster, West Vancouver, Saanich and Victoria.

[4] In the Vancouver police department, the traffic section is supervised by an Inspector who reports to a Deputy Chief Constable.

[5] Authorized police strength as of December 31, 1998: the authorized strength of the RCMP is obtained from RCMP "E" Division Headquarters; the authorized strength of the independent police departments is collected annually from each department by Police Services Division, Ministry of Attorney General.

- 129 positions in seven of the 12 independent municipal departments.

Apart from those in dedicated traffic units, every general duty/patrol officer is expected to deliver traffic services.

Many police managers view traffic services as a support function. This means that when resources are limited and there are competing demands, traffic officers may be called on to perform other duties, both temporarily and permanently.

In addition, there are situations such as extended sick leave, where on paper the position appears to be filled but the member is not actually available for work. In municipal police departments, a vacancy caused by extended sick leave is not filled until the member has been off for at least 90 days. Some municipal departments transfer the officer who is on sick leave to a phantom squad so they can fill the position sooner. In the RCMP, a member who has missed 160 hours is transferred to a medical collator; the position, however, still cannot be filled. Often, the manager will transfer an officer who is on leave—for medical or other reasons—into a traffic position, which means the unit appears to have more resources than are truly available.

Some RCMP detachments do not have enough officers to maintain all the shifts needed for effective enforcement. Some detachments reported that traffic enforcement ends at 4 p.m., while others can only support 8 a.m. to 8 p.m. shifts. Some police agencies use the enhanced enforcement programs supported by ICBC to deliver regular traffic enforcement, which means the benefits of increased visibility are lost and routine traffic duties are sometimes delivered on overtime.

While municipal Chief Constables are not immune to the competing demands on police time, because of the lower vacancy rates in their departments they do not experience the same pressures as the RCMP.

Of the 707 authorized traffic positions, almost 100 positions were reported vacant in 1998. In the same year, there were 2,872 authorized uniform patrol positions in B.C. and 383 were vacant. In other words, while the vacancy rate in traffic is significant (14 per cent), it is actually only slightly higher than the vacancy rate for all police positions (13 per cent).

2.5. Training

The Justice Institute of British Columbia (JI) is a training facility for nine academies and divisions reflecting special areas of expertise. It includes the Police Academy for independent municipal police departments, as well as academies for fire departments, ambulance services and provincial sheriffs.

The Police Academy provides basic training for municipal police recruits and ongoing training for all police officers in B.C., including the RCMP. A joint training initiative allows RCMP members to attend the JI and independent municipal members to attend the RCMP Fairmont Training Academy (Fairmont Academy) in Vancouver. Some courses, such as operation of the BAC Datamaster C, are offered at both locations. See Appendix A for a complete list of courses.

In 1998, the Police Academy admitted 92 recruits, for a police community of nearly 2,100 sworn members. Basic training provides recruits with a basic education in all aspects of police work, including Legal Studies, Investigation and Patrol, Professionalism and Communications Skills, Traffic Studies, Arrest and Control Techniques, Driver Training, Firearms and Lifestyle and Fitness. Block II of the basic training program exposes recruits to operational police work and allows them to use the skills they have learned. Recruits do not receive any further traffic-related training unless they attend advanced programs or their agency offers in-house training.

Police Services Division provides the Police Academy with a grant to fund recruit and advanced programs training for the municipal departments. The grant covers direct training costs for recruits and in-service programs. The respective agencies pay all other costs, including the salaries of both the member being trained and his or her replacement. Justice Institute facilities are funded by the Ministry of Advanced Education, Training and Technology.

All RCMP recruits are trained at Depot Division (Depot) in Regina. The only traffic services training recruits receive is Level I Collision Investigation and Collision Scene Management, taught as part of the Driver Training Program. Traffic services training takes place when recruits arrive at their posted province. In B.C., training is delivered at the detachment level, the district level and the Fairmont Academy.

At the detachment level, a recruit is assigned an on-site trainer. During the first six months, a recruit completes field training, comprising practical exercises and written exams, and is exposed to provincial traffic enforcement. Once the six-month in-service training is completed, a recruit may complete the Traffic Law Enforcement Course. This is a correspondence course specifically designed to familiarize recruits with provincial traffic statutes. Depending on its size, the detachment may also offer training in the use of equipment such as radar or laser.

Collision Investigation Level II training and Commercial Vehicle Enforcement training is conducted at the district level, allowing candidates from surrounding detachments and municipal police departments to participate. The JI and Fairmont Academy act as the district training facility for detachments and municipal departments situated in the Lower Mainland. On occasion, members outside the Lower Mainland may be sent to Vancouver to attend training courses at either facility.

When funding is available, the Accident Investigation Level III course is offered to all police, both independent municipal members and RCMP, at the Fairmont Academy. Traffic courses held at the Fairmont Academy, funded by ICBC, are filled on a ratio of two-thirds RCMP and one-third municipal members. "E" Division also funds courses for RCMP members.

2.6. Equipment

Traffic enforcement requires specialized equipment to deal with the many different traffic offences.

Speed enforcement equipment includes:
- hand-held radar units
- conventional moving radar units
- unconventional moving radar units
- laser units
- speed reader boards
- photo radar cameras.

Intersection enforcement equipment includes:
- police motorcycles
- intersection safety cameras
- unmarked police vehicles.

Impaired driving enforcement equipment, which must meet evidentiary standards, includes:
- Alcosensor IV DWF—a roadside screening device
- Alcometer S-L2—a roadside screening device
- BAC Datamaster C breath test instruments
- Borkenstein breathalysers—two models available
- Model 900/Model 900A

- blood sample kits
- cameras
- safety equipment for roadchecks.

Collision investigations conducted at the scene must collect all physical evidence and information to ensure a proper cause analysis. Police officers who attend the collision scene need different equipment from the collision analyst, who dissects the collision scene, or the collision reconstructionist, who recreates the dynamics of the collision. This following equipment may be used:

- still cameras
- varying camera lenses
- digital cameras
- video cameras
- measuring tapes—surveying
- surveying transits
- shot-markers for determining coefficient of friction
- drag sleds for determining coefficient of friction
- computers
- diagram plotters
- smart levels.

The number of vehicles required to carry out enforcement depends on the coverage area, the number of personnel, the types of roads and highways involved, and the kind of enforcement being considered. Different kinds of vehicles are used, including:

- marked police vehicles
- clean top police vehicles
- motorcycles
- photo radar vans
- unmarked police vehicles
- commercial transport inspection vehicles—vans or four-wheel drive vehicles.

Technology may allow police to achieve more effective results with fewer personnel. This includes computers for data collection systems, filing systems and reporting systems in both operational and administrative environments. Traffic units can also use technology to analyse problem areas and measure the effectiveness of activities. Possible equipment includes:

- computer terminals—dedicated to traffic unit use
- collision investigation software—surveying programs and diagram programs
- computer software for collision data collection
- printers—office printers and large diagram plotters
- mobile data terminals in police vehicles—for vehicle and driver licence queries and reporting.

2.7. Funding

The cost of the provincial police service (RCMP) is shared between the federal and provincial governments under the terms of the Provincial Police Services Agreement. The province pays 70 per cent of the contract costs while the federal government pays the remaining 30 per cent. The provincial police service is responsible for policing municipalities with a population of less than 5,000 and unincorporated areas of the province. Municipalities with a population less than 5,000 do not make a direct contribution toward the provincial police services they receive. However, the rural property tax, collected by the province from residents in unincorporated areas, serves to offset, to some degree, the cost of policing those areas.

There are two different cost-sharing formulas for municipal RCMP. Municipalities with populations exceeding 15,000 people are responsible for 90 per cent of the cost of their police services. Municipalities with populations between 5,000 and 15,000 people are responsible for 70

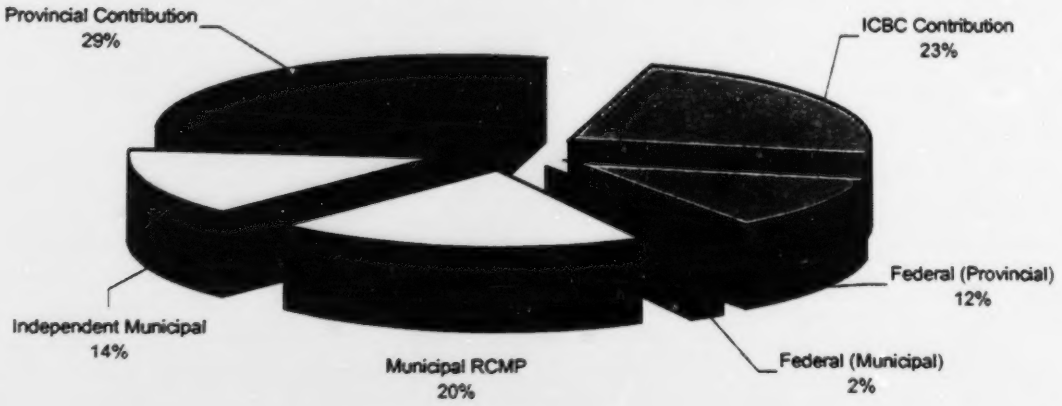
per cent of the cost of their police services. The federal government pays the remaining 10 per cent and 30 per cent respectively.

The 12 independent municipal police departments are funded 100 per cent by their respective municipalities.

In 1998, over $98 million was spent on police traffic services in the province, including federal and ICBC contributions. This amount would be higher if traffic duties performed by general duty officers were taken into account.

The following diagram, Diagram 2, shows the percentage of estimated traffic services delivery costs in the province.

Diagram 2: Overall Funding for Traffic Services



In 1998, the estimated cost of provincial RCMP policing was $185.5 million, including the provincial and federal share. The estimated cost of dedicated traffic services was $39.8 million: the federal government is estimated to have contributed close to $12 million and the estimated cost to the provincial government was $27.9 million.[6]

In 1998, the estimated overall contract costs for police services for the municipal RCMP was $266 million. Traffic services represented close to $22 million—$2.1 million from the federal government and $19.8 million from the municipalities.[7]

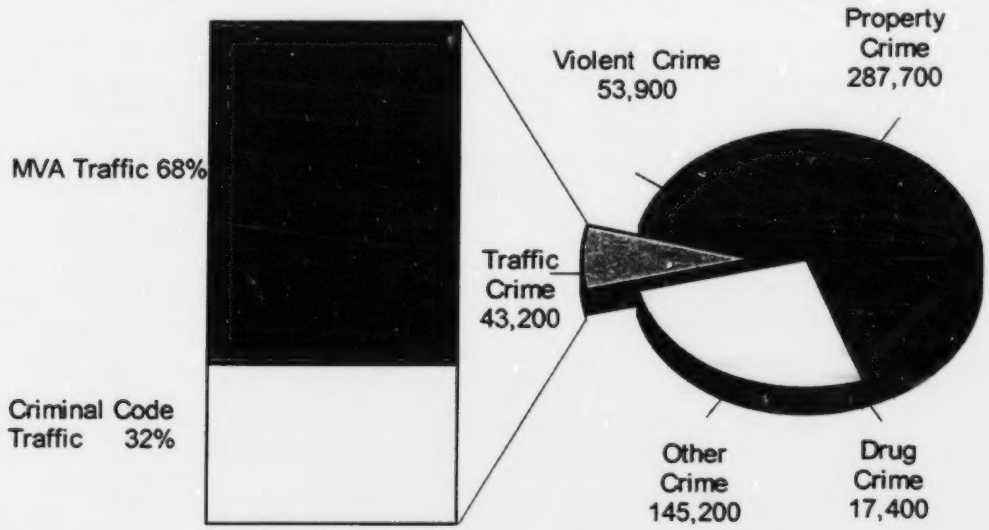
In 1998, the total estimated cost of policing for the independent municipal police departments was $218.3 million, of which $13.8 million was spent on traffic services.

In addition to the money spent by government on police traffic services, ICBC contributed close to $23 million in 1998[8], including 400,000 in equipment grants, reimbursing the provincial and local governments for enhanced police programs. ICBC supports traffic services on a year-to-year basis by providing overtime for enhanced enforcement programs, paying for or subsidizing new equipment and funding the photo radar and red-light camera programs. The Ministry of Attorney General and ICBC are currently developing a multi-year funding strategy to sustain effective enhanced policing. The Traffic Services Study will help shape this future direction to ensure that the most effective programs are supported.

[6] Costs of dedicated traffic units and highway patrol units are calculated by multiplying the ratio of authorized traffic members to total authorized strength by the total actual expenditures.
[7] Ibid.
[8] In 1999 this figure increased to $43 million.

2.8. Activity

Diagram 3: Traffic Offences by Category as a Proportion of Total BC Offences (1998)



Police in B.C. enforce traffic laws through base and enhanced enforcement.

Base enforcement delivered by officers during a regular designated shift can be done in either a random or intuitive manner. Some traffic unit managers deploy officers to address specific offences in high-collision areas; however, transition to this problem-solving approach has been slow.

Enhanced enforcement involves programs funded by ICBC. Some involve an officer working overtime to handle traffic enforcement. While these officers are available to deal with any criminal offence, they generally focus on a specific type of traffic enforcement, such as impaired driving. The overtime programs aim to change high-risk driving behaviour by enhancing base enforcement and increasing both police visibility and the offender's risk of apprehension.

There are currently four enhanced enforcement programs:

- **CounterAttack** began as a base enforcement program in 1977, first as a holiday season campaign and then as a special enforcement campaign through the year. Its goal is to inform the public about the dangers of impaired driving and to support highly visible police enforcement. The Enhanced CounterAttack Program, funded by ICBC, began in 1995, with roadchecks from July to December and advertising support to heighten public awareness. In the last three years the Enhanced CounterAttack program has been extended to provide provincewide roadchecks for nine months of the year.

- **Targeted Traffic Enforcement Partnerships** (TTEP) is a program aimed at increasing police enforcement and visibility in high-collision areas. The program arose from a 1995 RCMP/ICBC initiative aimed at addressing unsafe speed on the Sea-to-Sky Highway. ICBC paid overtime to enhance base enforcement and increase both police visibility and enforcement. This initiative developed into the Enhanced Corridor Enforcement Program, which was renamed TTEP in 1999 and expanded to include all aggressive driving behaviour, not just unsafe speed. Through TTEP, ICBC supports police overtime and police agencies

agree to maintain regular base traffic enforcement on a specific segment of highway or a major municipal artery.

- B.C.'s **photo radar** program has 30 vans with cameras that monitor every passing vehicle and take a photograph of those travelling above a selected threshold speed. Its goal is to reduce traffic speed and thereby reduce the number and severity of speed-related crashes. The program operates in locations where a community has identified a crash problem or a significant concern about speeding. The deployment of photo radar is the responsibility of the ITCU.

- B.C.'s **red-light camera** program began in 1999. It combines camera enforcement at high-density, high-crash intersections and public education. Local police, on behalf of their communities, recommend sites to the ITCU, which in turn confirms that collision problems are the result of red-light running, not engineering or structural problems.

In 1998, B.C. police processed 13,900 Criminal Code traffic charges, about half as many as reported in 1989. Sixty-six per cent of the 1998 Criminal Code offences (about 9,200 of 13,900) were related to impaired driving. The rest involved failure to stop or remain at the scene of an accident (14 per cent), driving a motor vehicle while prohibited (eight per cent), refusing to provide a breath or blood sample (eight per cent), and dangerous operation of a motor vehicle (six per cent).

In 1998, the police processed 693,559 provincial traffic violations, through both base and enhanced enforcement. More than half (57 per cent, or 395,317) were processed by officers working under one of the enhanced programs.

The following is a list of the top 10 traffic violation categories processed by police in 1998:

	Tickets	%*
• speeding	588,033	85
• 24-hour prohibitions	44,295	6
• failure to wear seat-belt	40,777	6
• failure to produce driver's licence	28,611	4
• no insurance	14,028	2
• disobey traffic control device	8,874	1
• disobey red light	8,466	1
• disobey yellow light	4,550	1
• motor vehicle equipment	4,447	1
• following too closely	4,205	1

*Rounded to the nearest percentage point

Speeding violations accounted for close to 85 per cent of all violations. Possible explanations for this situation include the prevalence of speeding and the fact that speeding is easy for police to detect, speeding is often the focus of special enforcement campaigns, and violations are one means for officers to show results for their performance evaluation.

About 65 per cent of all speed-related violations issued in 1998 were processed under ICBC-funded programs, including 89,886 through the TTEP program and 291,586 through photo radar.

Alcohol-related offences accounted for 8.8 per cent, or 61,185, of all driving offences in 1998. Seventy-two per cent of these violations were 24-hour driving prohibitions issued under the Motor Vehicle Act, while 15 per cent were alcohol-related charges processed under the Criminal Code.

Twenty-two per cent, or 13,845, of the alcohol-related charges were processed during Enhanced CounterAttack.

Intersection-related enforcement accounted for 5.7 per cent of all violations. Of those, stop/yield offences accounted for 47 per cent of the intersection-related violation tickets, automated intersection offences accounted for 37 per cent, and improper turn infractions accounted for 15 per cent.

2.9. Information Technology

In response to the study's environmental scan survey, B.C. police agencies reported that in 1998 they had 3,272 computers, with 216 dedicated to traffic units, and 806 printers, with 40 dedicated to traffic units.

RCMP detachments indicated they had 1,900 computers and 431 printers with 86 and 32, respectively, dedicated to traffic units. The number of computers varied considerably, from none in some detachments to 410 in Surrey. Close to half of the computers in B.C.'s RCMP detachments were in Surrey, Burnaby, North Vancouver and Richmond. The 17 autonomous RCMP highway patrols reported having 86 computers and 40 printers.

The 12 independent municipal police departments reported having more than 1,200 computers and 335 printers, with 33 computers and 13 printers dedicated to traffic units.

The scan showed that B.C. police agencies had a total of 64 computers with collision reconstruction software in 1998—the RCMP had 26, independent municipal departments 11 and autonomous highway patrols 27.[9]

All fields of police work are using more technology, from DNA processing to computer crime. Traffic services are no exception. Some B.C. police agencies reported that they had begun to use mobile workstations that allow officers to deal with investigation inquiries quickly in their vehicle rather than returning to the department or detachment office. This is not only more efficient, but it maintains high visibility, improving the effectiveness of traffic services.

2.10. Information Management

The collection, storage, retrieval and analysis of data is of critical importance to police enforcement strategies. Police managers need reliable and timely collision data to deliver traffic services effectively. Analysis of collision data, for example, may help identify what is causing crashes at high-collision locations to ensure that the most effective enforcement methods are used.

Information sources that are used to support traffic services include the Police Information Retrieval System (PIRS), the B.C. Traffic Accident System (TAS), in-house databases, and manual information retrieval.

PIRS is an RCMP database that can provide base data related to any police file, such as date, time, type of offence, general location, file numbers and information on individuals involved. PIRS, however, does not provide information on causal factors in collisions, associate days of the week, identify specific incident locations or permit relevant collision data. Both RCMP and municipal police departments have access to PIRS to collect and/or compile information. The RCMP handles the data entry.

The Operational Statistics Reporting (OSR) System, which operates within PIRS, is an incident-based database that stores information concerning criminal events and their investigations. While the RCMP is the primary user, most independent municipal departments use it to collect statistical

[9] Note that these figures exclude the information technology counts of the collision reconstructionists.

data on crime. The OSR system does not collect detailed information pertaining to the time of the incident, day of the week or any relevant data concerning the incident itself.

The OSR system permits the collection of special survey statistics within the province. For example, special survey codes can be used to identity collisions involving commercial vehicles or wildlife. Unfortunately, the system only provides numbers of incidents and for traffic purposes all incidents are recorded as moving or non-moving violations. As a result, the system lacks the detailed data often required for strategic planning.

While the provincial Traffic Accident System (TAS) provides B.C. police with more of the data needed to prepare strategic operational plans for traffic enforcement, the annual Traffic Collision Statistics book (which contains the data) is generally at least a year out of date. As well, the Traffic Collision Statistics book only includes police-attended injury and fatal collisions; it does not capture data on driver self-reported collisions or property damage crashes.

TAS can provide information for traffic managers regarding the collision situation in designated areas, but the police say this information often arrives too late to be of any appreciable value and lacks the detail needed to develop a strategic operational plan. Police and ICBC representatives are looking at ways to validate and improve the crash information available to police.

In addition to the broader databases, some traffic unit commanders manually collect and review collision files to compile their own data for analysis. This process is labour intensive, but it gives a more accurate and up-to-date view of local traffic safety concerns.

Some traffic unit commanders have also created their own computer programs or manual systems to record local data needed to focus their enforcement activities. However, these local databases usually do not have the data required to conduct a reliable analysis of collision casual factors such as incident location, days of the week and time of day. They vary in detail, accuracy and methodology, and often depend on the needs of the specific manager. Their use is further limited as they usually cannot download information from a central program to address provincial collision causal factors or develop regional strategic plans.

2.11. Performance Measures

Historically, the number of tickets they issue or contacts they make during a given shift, week or month has measured traffic officer performance. This has encouraged the police to work in areas where they can issue a lot of tickets or warnings regardless of the number of collisions that may have occurred in a particular location.

Collision investigations have usually been viewed as an expected part of an officer's duties and only noted in the officer's assessment if they were high profile collisions or involved extraordinary investigation. Similarly, daily attendance at property damage or minor injury collisions often have received little comment in an assessment unless it has involved some type of extended investigative technique.

Some police managers ask-officers to submit a regular activity report that is then compared with local crash data to assess the effectiveness of enforcement and to make necessary adjustments, although the general unavailability of timely and reliable data may make this difficult.

3. MAGNITUDE OF TRAFFIC SAFETY ISSUES

3.1. Police, Public and Stakeholder Perceptions

Consultation Methodology

An important element of the Traffic Services Study has been its consultation with the police community, stakeholder organizations and the public. Each is important in improving road safety in B.C.

The consultations involved a number of specific activities:

- The study's discussion paper invited submissions and a total of 74 submissions were received —39 from the public, 21 from police or former police officers and 14 from road safety stakeholders. (The 39 public submissions are too small a sample to be considered representative of B.C.'s population.)

- The steering committee met with representatives of the B.C. Association of Police Boards, the B.C. Automobile Association (BCAA), the B.C. Federation of Police Officers[10], the B.C. Trucking Association, the Union of B.C. Municipalities (UBCM), the President and CEO of ICBC, and the Transportation and Safety Committee of the ICBC Board of Directors.

- Focus groups were conducted at the annual general meeting of the B.C. Association of Chiefs of Police (BCACP) Traffic Safety Committee (TSC)[11] in March 2000 to explore the perceptions of the 82 members in attendance about their ability as traffic officers to influence road safety and the impact their work has on community safety.

- Regular newsletters were issued throughout the study to keep police informed of study activities and to invite feedback; regular conference calls took place with the chair and vice-chair of the BCACP TSC and presentations were made to the BCACP's quarterly meetings (November 1999, February, June and September 2000).

- A survey of the entire B.C. police force was conducted in December 1999/January 2000; the number of surveys tabulated was 1,564, for a response rate of about 22 per cent.

- A telephone poll of 803 British Columbians was conducted in January/February 2000 by a research company to determine public attitudes to traffic law enforcement and education. The interviews were conducted with a randomly selected sample of British Columbians, 18 years of age or older. The margin of error for the total weighted sample of 800 was +/- 3.5 per cent, 19 times out of 20.

The study team also worked in collaboration with the National Traffic Study, an initiative of the Traffic Committee of the Canadian Association of Chiefs of Police, RCMP Headquarters and RCMP "K" Division in southern Alberta. The project is developing a model for delivery of quality traffic services using an analytical problem-solving approach.

[10] The B.C. Federation of Police Officers represents about 1,000 officers in all B.C. municipal departments with the exception of Vancouver Police Department.

[11] The BCACP Traffic Safety Committee has been a constituted standing committee of the BCACP since 1988. Its primary purpose is to promote public safety by identifying, prioritizing and addressing common road safety issues of the police community and its partners and to encourage legislative reform in support of increased road safety.

This section summarizes the many comments and suggestions received. Appendix B includes a full summary of the comments received from the consultations.

Overview

Participants in the BCACP Traffic Safety Committee (TSC) focus groups indicated that they believe traffic enforcement saves lives, reduces injuries and protects property by making roads safer. They felt a visible police presence generally enhances community safety and discourages crime. This view was mirrored in the public's comments. Two-thirds of the respondents to the study's public opinion poll said they think that more emphasis on traffic enforcement would translate to a noticeable drop in traffic injuries and deaths; and three-quarters said less emphasis could mean a noticeable increase in casualties.

At the same time, TSC members said they felt police managers see traffic as a low priority and often draw on traffic resources to fill general duty vacancies to take on other non-traffic duties. While this position was echoed in many responses to the police survey and in discussion paper submissions from the police, close to half of the senior managers who responded to the survey said they viewed traffic services as a high or very high priority.

Many officers who submitted comments as a response to the discussion paper were concerned about what they perceived to be a deterioration of traffic services. Some said they felt ICBC-funded enhanced enforcement programs were leading to reductions in regular enforcement and allowing municipalities to ignore their traffic responsibilities.

ICBC's submission in response to the discussion paper also addressed what it saw as a significant decline in police resources directed at road safety, something ICBC says is not equally evident in other areas of police enforcement. ICBC claimed that the benefits resulting from its special traffic enforcement programs might be reduced by the lack of base traffic services[12].

A number of submissions addressed the issue of base funding for traffic services. BCAA said the police should have enough staff and resources to deliver special enforcement programs as part of their regular duties. BCAA, the UBCM and the B.C. Association of Police Boards were among those that said improved fine revenue sharing could encourage communities—especially those that pay all their own policing costs—to maintain or increase traffic services. However, all agreed that community safety, not revenue collection, must continue to be the priority.

BCACP TSC focus group participants identified the need for more resources—people and equipment—to improve traffic service delivery, and suggested that traffic officers would be better equipped to find solutions if they could attend and investigate more crashes. They acknowledged that money alone is not the only way to improve traffic service delivery, saying B.C. needs a strategic plan that sets out the role of traffic law enforcement in creating safe communities and emphasizes the value of traffic services.

Focus group participants supported creating a special traffic unit, which they said would ensure that officers could concentrate on traffic activities. On the other hand, the B.C. Federation of Police Officers told the study that training general duty officers to handle traffic duties increases the number of officers that are available to deliver traffic services and increases deployment flexibility.

The B.C. Cycling Coalition's submission said B.C. should develop an overall road safety management system involving a coalition of major agencies and organizations involved in traffic

[12] ICBC advised the study that the Attorney General and the Minister Responsible for ICBC had agreed to look at a new approach for funding special enforcement programs. That would involve a more strategic deployment led by the Attorney General and police with multi-year and results-based funding.

safety. The UBCM said there is a need to plan communities that offer safe and efficient transportation for all road users, including pedestrians, cyclists, in-line skaters, push scooters, vehicles and even horse-drawn carts and pedicabs.

In the public opinion poll, when asked without prompting to name what they consider is the most important traffic safety issue facing B.C., one in five chose drinking and driving and the same number chose speeding. A total of 31 different issues were identified, including poor/careless drivers, congestion, improperly following traffic lights, young drivers, elderly drivers, new drivers and the use of cell phones while driving.

Impaired Driving

Police, stakeholders and the public cited impaired driving as the top traffic safety concern. Respondents to the police survey rated impaired driving as the top priority for traffic enforcement and sixth priority overall when presented with a list of enforcement activities.[13] The public poll found that British Columbians of all ages, at all levels of driving experiences and in all regions of the province rated impaired driving as the top enforcement priority.

The police survey asked officers with traffic duties what action they would take if they stopped a driver they thought was impaired, and more than half said they would submit a charge of impaired driving under the Criminal Code. From a list provided, the reasons given for not submitting a charge under the Criminal Code included taking too much time to process a Criminal Code impaired driving charge (62 per cent); a 215 gets the driver off the road (61 per cent); insufficient staff available to process the impaired driver (49 per cent); driver likely to be found not guilty of charge (40 per cent); driver likely to plea to a lesser included offence (36 per cent). The most frequently cited reason freely given by those who did not generally submit a charge of impaired driving was lack of support from the courts.

BCAA was among the stakeholders that said impaired drivers, especially hard-core offenders, should expect to be charged, convicted and face a tough penalty or else they will see no reason to change their behaviour. BCAA added that there is little value in introducing tougher impaired driving sentences when existing maximum sentences are seldom imposed.

Police, stakeholder and public submissions also expressed concern about the rising number of 24-hour prohibitions and some urged government to explore the potential of allowing officers to use roadside screening devices to support an administrative driving prohibition (ADP) and possibly reduce the threshold for an ADP to 50 mg%.

A number of submissions called for mandatory remedial programs for convicted impaired drivers. BCAA and Mothers Against Drunk Driving (MADD) pointed out that B.C. is the only Canadian province without such a program.[14]

Police, stakeholders and the public all indicated a high degree of support for CounterAttack roadchecks. Some suggested combining highly visible roadchecks with patrols on less-travelled routes at times when impaired drivers are more likely to use them. ICBC recommended expanding CounterAttack to cover all B.C. communities with populations of more than 15,000.

Several submissions received in response to the discussion paper said extra effort is needed to deal with hard-core or repeat offenders. The Western Brewers Association said that according to the Traffic Research Injury Foundation, hard-core drinking drivers represent less than three per cent of

[13] The list of enforcement activities included arson, assault, break and enter, domestic violence, drinking under age, forgery, impaired driving, intersection violations, kidnapping, murder, possession of marijuana, receiving stolen goods, robbery, sexual assault, speeding and vehicle occupant restraints.
[14] B.C. is in the final stages of preparing its remediation program and expects it will be in place by 2001.

Canada's driving population, yet account for 84 per cent of all drunk driving occurrences each year.[15] It referred to a study from the U.S. National Highway Traffic Safety Administration, which found that convicted drinking drivers were only slightly over-represented in alcohol-related crashes in California and were not a major aspect of the impaired driving problem.

The B.C. Federation of Police Officers was among those that said more police should be trained as drug recognition experts so that drivers who may be impaired by a substance other than alcohol can be dealt with more effectively.

Unsafe Speed/Photo Radar

The issue of speed generated sharply different responses from many of those consulted. Some public submissions said speed limits in B.C. are too low and claimed enforcement restricts the majority who speed in what was described as a safe and responsible manner. Yet the public poll asked residents to identify the most important traffic safety issue facing B.C. today and speeding was cited as frequently as impaired driving. Public poll respondents also saw speeding as one of the biggest contributing factors to car crashes, just after careless driving and ahead of impaired driving.

SENSE said discussions about speeding often fail to distinguish between any speed above the posted limit and the point where speed becomes excessive and what it called truly dangerous. Yet the B.C. Cycling Coalition contended that drivers who speed frequently demonstrate dangerous driving behaviours and said there should be a zero tolerance policy.

Police submissions in response to the discussion paper showed support for the current emphasis on speed enforcement. However, the police survey found that three-quarters of those who responded rated impaired driving as a high or very high priority, while only a quarter rated speeding at this level, with most seeing it as a moderate priority.

The police and stakeholders in general support photo radar speed enforcement, although many recommended changes they felt would improve its effectiveness.

In their discussion paper submissions, many police officers described photo radar as a tool available to them to deliver traffic services, but noted that the program suffers from a shortage of staff, equipment and accurate data, similar to other traffic services. Several officers said they thought the existing site selection criteria and policies are cumbersome and inflexible and need to be modified. Others suggested making photo radar part of a larger multi-function unit or local traffic units so it could be moved frequently and quickly to address problems.

BCAA maintained that photo radar must be concentrated at sites with a serious crash or high-speed problem. It said that conventional speed enforcement is more effective in areas such as schools and playgrounds.

ICBC said photo radar is more successful in jurisdictions where there is more equipment or a smaller area to cover. It suggested B.C.'s photo radar program would need 67 cameras and 80 vans, with a similar increase in personnel, if it were to be optimized under its current deployment strategy. Some police submissions also called for more equipment, but a few officers involved with the program noted in their submission that the existing equipment sits idle when no trained operational staff is available.

SENSE and a number of submissions from the general public called for photo radar to be eliminated, citing what they said were high operating costs and limited effectiveness. SENSE

[15] MADD, however, said this view risks marginalizing the impaired driving problem in Canada. (See comment on page B9.)

challenged the methodology used to evaluate B.C.'s photo radar program and stated that it saw no visible improvement in the number of fatalities when photo radar was implemented.

Public submissions that called for an end to photo radar speed enforcement cited a number of reasons, including the length of time between the offence and arrival of the ticket in the mail and use in areas that are not high-crash locations.

All police submissions in response to the discussion paper stated that police must manage the photo radar program. The police had differing views on whether civilians could operate photo radar equipment, while a number of the stakeholders and public said there is potential in moving to civilian operation.

There was a high level of support for red-light cameras; the UBCM said red-light running is a huge issue and intersection cameras are welcome. The B.C. Federation of Police Officers said photo radar and red-light cameras are effective enforcement tools if used at high-speed or high-crash locations.

3.2. Crash Analysis

What is causing crashes and the resulting fatalities and injuries in B.C.? Who is involved in crashes? When do most crashes occur? How do most crashes occur? These are questions that must be answered if road safety is to be improved in this province.

This section of the report summarizes police crash data (reported by police and collected and stored by ICBC) and data analysis conducted by the B.C. Injury Research and Prevention Unit (data from the B.C. Coroners Service, hospitals and the B.C. Vital Statistics Agency on fatalities and injuries related to motor vehicle crashes).

I. POLICE-REPORTED CRASHES

The following analyses are based on 108,239 crashes that were attended and reported by the police[16] from 1997 to 1999 (36,699 in 1997, 35,841 in 1998 and 35,699 in 1999).

B.C. police attend and report virtually all crashes involving fatalities and most serious-injury crashes, so the crash counts associated with these analyses cannot be used to reflect the number or proportion of crashes by severity. However, within each crash severity type, the relative proportions of the various profiles (times, contributing factors, etc.) are likely to be fairly representative of the overall crash picture.

For all police-reported crashes, the top five contributing factors were driving without due care (29 per cent), failure to yield right of way (20 per cent), unsafe speed (16 per cent), alcohol (13 per cent) and weather (10 per cent).

The top five contributing factors for fatality crashes were driving without due care (35 per cent), unsafe speed (34 per cent), alcohol (27 per cent), failure to yield right of way (10 per cent), and weather (9 per cent).

It should be noted that although driving without due care was the most often reported contributing factor for all crashes, it has little specific meaning, likely acting as a "catch-all" for behaviours that can range from driver distraction and inattention to driver ignorance.

[16] It must be cautioned that these analyses are based on crashes where police attended and submitted reports. They probably represent less than 14 per cent of the total number of crashes as estimated by ICBC claims data.

Table 1: Top Five Contributing Factors

Contributing Factor	Contributing Factor %				Total %
	No Injury	Light to Moderate	Serious	Fatal	
Driving Without Due Care	28.0	30.5	34.5	35.4	29.3
Failure to Yield Right of Way	18.2	22.1	16.5	9.8	19.5
Unsafe Speed	15.2	16.8	24.7	34.4	16.3
Alcohol	12.7	11.3	24.1	27.0	12.7
Weather	9.8	10.7	9.7	9.2	10.2

A. Crash Profiles

In analysing the police crash data, 15 crash profiles were identified as prevalent in the provincial crash picture. The profiles can be placed into one of two categories: those that lend themselves to enforcement-based countermeasures, and those that do not (i.e., weather). Fifty-five per cent of the 108,239 police-reported crashes were determined to be uniquely classifiable as one of six profiles that can be targeted for change using enforcement activities, namely:

- ignoring stop/yield signs (crashes caused by ignoring the stop or yield sign)
- following too close (crashes caused by following too closely)
- speeding and losing control (crashes caused by speed and loss of control on a grade or curve)
- ignoring automated signal (crashes caused by ignoring an automated signal)
- using alcohol and Criminal Code charge (crashes caused by alcohol)
- turning improperly (crashes caused by an improper turn).

Crash Profile Distribution

Crashes resulting from ignoring a stop or yield sign made up nearly one quarter of the total. Crashes resulting from following too closely, speeding and loss of control, and ignoring an automated signal each made up nearly 20 per cent of the total. Crashes as a result of alcohol use made up about 11 per cent of the total, while crashes resulting from improper turns made up eight per cent of the total.

Table 2: Crash Profile Distribution

Factor	#	%
Stop/Yield Sign	14,113	23.7
Follow Too Close	11,798	19.8
Speed Loss Control	11,442	19.2
Automated Signal	11,283	18.9
Alcohol & Charge	6,375	10.7
Improper Turn	4,628	7.8
Total	**59,639**	**100**

Crashes by Injury Type[17]

Two-thirds of all serious crashes were the result of speed and loss of control, alcohol or ignoring an automated signal, and 60 per cent of all fatal crashes were the result of speed or alcohol (about 30 per cent each). Correspondingly, crashes resulting from alcohol, speed and loss of control and ignoring an automated signal had greater proportions of serious injuries and fatalities than the other profiles.

With the exception of the profiles involving following too closely and ignoring an automated signal, 55 per cent or more of the crashes in all profiles resulted in no injuries. Following too closely and ignoring an automated signal made up a greater percentage of crashes resulting in light to moderate injury than all other profiles.

Table 3: Profiles by Injury Type

Factor	% Factor in Injury Type			
	No Injury	**Light/Mod.**	**Serious**	**Fatal**
Stop/Yield Sign	24	23	**21**	15
Follow Too Close	17	24	8	3
Speed Loss Control	21	17	**22**	**29**
Automated Signal	17	21	**22**	17
Alcohol & Charge	11	9	**21**	**30**
Improper Turn	9	7	7	6
Total	**100**	**100**	**100**	**100**

Crashes by Jurisdiction[18]

Forty-six per cent of crashes on highways and more than 60 per cent of crashes occurring in rural jurisdictions were a result of speeding. Thirty-nine per cent of speed crashes occurred in metropolitan areas, while 28 per cent occurred on highways. No other profile had as significant a proportion of its crashes on highways as speeding.

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[17] Crashes were divided into those having:

- no persons reported injured (61,777 or 57.9 per cent)
- maximum injuries reported as light to moderate (40,185 or 37.6 per cent)
- maximum injuries reported as serious (3,769 or 3.5 per cent), and
- an apparent fatality (1,071 or 1.0 per cent).

Light to moderate injuries means the most seriously injured victim had the possibility of face, shoulder, elbow, hip, and/or knee as the location of the most severe injury, with dislocation, whiplash, lacerations and/or the possibility of an incoherent state of consciousness.

Serious injuries means the most seriously injured victim had the possibility of eye, neck, abdomen/pelvis and/or back as the location of the most severe injury, with fracture, concussion and/or burns and a state of consciousness ranging from semi-conscious to unconscious.

[18] The Lower Mainland and Greater Victoria areas make up the metropolitan category, jurisdictions having a population over 25,000 make up the large city category, and jurisdictions with populations from 7,000 to 25,000 make up the small city category. The provincial highway category includes all crashes categorized as provincial highway crashes on the MV104 that were not captured in the previous jurisdiction categories. Likewise, all rural crashes not already captured were placed in the rural road category. Crashes categorized as "municipal road" in the remaining small jurisdictions were placed in the "small city" jurisdiction category.

A majority of alcohol-related crashes (57 per cent) occurred in metropolitan areas, although only a small portion of all crashes occurred in metropolitan areas. Nearly 20 per cent of crashes occurring on rural roads were a result of alcohol. No other jurisdiction had as high a proportion of alcohol crashes.

Automated signal crashes, improper turn crashes and following too closely crashes occur largely in metropolitan areas (70 per cent or greater). A majority of crashes in metropolitan areas (70 per cent) were the result of ignoring an automated signal, ignoring a stop/yield sign or following too closely (about 23 per cent each). Nearly one-third of crashes in large and small cities were a result of ignoring stop/yield signs. Twenty-six per cent of crashes in small cities were a result of speeding.

Table 4: Profiles by Jurisdiction

Factor	% Factor in Jurisdiction Type				
	Rural	**Hwy**	**Small City**	**Large City**	**Metro**
Stop/Yield Sign	12	11	**30**	**30**	**24**
Follow Too Close	4	23	13	17	22
Speed Loss Control	**61**	**46**	26	15	12
Automated Signal	2	6	10	18	**24**
Alcohol & Charge	18	10	15	13	9
Improper Turn	4	5	6	7	9
Total	**100**	**100**	**100**	**100**	**100**

Crashes by Time of Day and Day of Week

One-third and one-quarter of crashes occurring between midnight and 6 a.m. were due to alcohol and speeding, respectively. One-quarter of crashes during rush hours were due to ignoring stop/yield signs. Just over one-half of crashes during the workday were a result of ignoring stop/yield signs or following too closely (27 per cent and 26 per cent respectively).

With the exception of alcohol-related crashes, other profile type crashes tended most often to occur during the workday (9 a.m. to 5 p.m.) and rush hours (6 a.m. to 9 a.m. and 5 p.m. to 8 p.m.). Alcohol-related crashes occurred most often between midnight and 6 a.m. (39 per cent) and between 8 p.m. and midnight (28 per cent).

Table 5: Profiles by Time of Day

Factor	% Factor in Time of Day			
	Work-day 9–5	**Rush Hr. 6–9/5–8**	**Evening 8–mid**	**Night Mid–6**
Stop/Yield Sign	**27**	**25**	20	14
Follow Too Close	**26**	21	11	5
Speed Loss Control	17	19	21	**25**
Automated Signal	18	20	20	18
Alcohol & Charge	3	7	20	**33**
Improper Turn	8	8	8	6
Total	**100**	**100**	**100**	**100**

Alcohol and speeding crashes were most common Friday through Sunday. Correspondingly, the proportion of crashes on Saturday and Sunday due to speeding or alcohol was greater than on any other day of the week. Crashes caused by ignoring a stop or yield sign, following too closely, and making an improper turn were most prevalent on Fridays. Automated signal crashes were most prevalent on Fridays and Saturdays.

Table 6: Profiles by Day of Week

Factor	% Factor in Day of Week						
	Mon	Tues	Wed	Thur	Fri	Sat	Sun
Stop/Yield Sign	25	25	26	24	24	22	21
Follow Too Close	21	21	21	21	21	17	16
Speed Loss Control	19	18	18	18	18	**21**	**24**
Automated Signal	20	20	19	19	18	18	20
Alcohol & Charge	5	6	6	7	8	**12**	**11**
Improper Turn	10	11	11	11	11	10	10
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Crashes by Month
Speed crashes tended to peak in the winter months of November, December and January. Alcohol crashes peaked in March and August. All other profiles had greater numbers of crashes in October and November than in other months.

Crashes by Crash Entity[19]
The majority of crashes involved a car (68 per cent) or a pickup truck (20 per cent). While accounting for only 5.7 per cent of crashes, nearly a third of heavy vehicle crashes were the result of speeding and nearly half of pedestrian-involved crashes were the result of a vehicle ignoring an automated signal. Slightly more than half of crashes involving a bicycle were the result of ignoring a stop or yield sign. Similarly, over half of motorcycle crashes were the result of ignoring a stop or yield sign or speed and loss of control.

Crashes by Age
Drivers aged 26–40 were involved in proportionately higher numbers of crashes of all profile types, with 42 per cent of alcohol crashes involving drivers in this age group. Drivers aged 41–64 were the second most often reported age group in crashes, involved in approximately a quarter of crashes in each profile. Compared to other profiles, drivers aged 20–25 were most often involved in alcohol-related crashes. Interestingly, drivers aged 65 or older tended to be most involved in crashes related to ignoring a stop or yield sign and improper turns.

Crashes by Gender
More males, than females were involved in crashes (e.g., females were involved in only 23 per cent of automated signal crashes and only 35 per cent of stop/yield sign crashes).

Crashes by Restraint Use
There was a significantly lower use of restraint devices (41 per cent) in fatal crashes on rural roads as compared to restraint device use in fatal crashes in urban areas (an average of 67 per cent use) and on highways (71 per cent).

While the reliability of overall occupant restraint data is questionable due to reporting problems, the data suggest that in only two-thirds of alcohol crashes was the driver wearing a restraint device as compared to reported restraint use in excess of 90 per cent in other crash profiles.

The following is a summary table of significant findings regarding crash profiles.

[19] Crash entities are passenger vehicle (car), light truck (pick-up), heavy commercial vehicle (10,900 kg or more), other motor vehicle type, pedestrian, motorcycle or bicycle.

Table 7: Crash Profiles—Predominant Characteristics

Crash Profile	Dist. of Crashes rounded	Crash Severity	Jurisdiction	Time & Day of Week	Month
Ignore Stop/Yield Sign	24%	No injury & light to moderate injury	66% occur in metropolitan areas	• 9 a.m. to 5 p.m. & rush hours • Friday	October & November
Follow Too Close	20%	No injury & light to moderate injury	70% occur in metropolitan areas	• 9 a.m. to 5 p.m. & rush hours • Friday	October & November
Speed	19%	Fatal, serious & no injury	61% and 46% of all crashes on rural roads & highways respectively are speed crashes	• 9 a.m. to 5 p.m., rush hours & midnight to 6 a.m. • Friday through Sunday	November December & January
Ignore Automated Signal	19%	Light to moderate & serious	81% occur in metropolitan areas	• 9 a.m. to 5 p.m. & rush hours • Friday & Saturday	October & November
Alcohol	11%	Fatal & serious	Nearly 20% of all crashes on rural roads are alcohol crashes	• 8 p.m. to 6 a.m. • Friday through Sunday	March & August
Improper Turn	8%	No injury, light to moderate & serious	74% occur in metropolitan areas	• 9 a.m. to 5 p.m. & rush hours • Friday	October & November

II. PATTERNS OF MOTOR VEHICLE TRAFFIC INJURIES AS REPORTED BY B.C. CORONER, B.C. VITAL STATISTICS AGENCY, HOSPITAL AND EMERGENCY DEPARTMENT DATA

The B.C. Injury Research and Prevention Unit has developed a profile of serious motor vehicle traffic crashes to identify high-risk traffic issues that can be targeted by traffic services. Data from the B.C. Vital Statistics Agency, the B.C. Coroners Service, B.C. hospitals and B.C. Children's Hospital emergency department for 1995–1998 was used to present a provincial and regional profile of traffic injuries in B.C.

Findings include:

- Youth (15–24) and seniors (80+) tend to have higher death and hospitalization rates resulting from motor vehicle crashes. Rates of motor vehicle traffic injuries tend to be higher among males than among females.

- Northern and rural regions have higher rates of death and hospitalization resulting from motor vehicle crashes. This is likely due in part to adverse environmental conditions, higher speeds, poor road conditions and less accessible medical care. The lowest proportions of driver and passenger deaths are found in Greater Vancouver/Greater Victoria, but these areas have higher proportions of cyclist and pedestrian deaths.

- Alcohol is a major contributing factor in fatal crashes across all regions. The proportion of legally impaired male drivers is about twice that of female drivers.

- B.C. Children's Hospital emergency department data show a higher frequency of crash injuries in the summer, on weekends, in the afternoon and in the early evening hours. A high number of children (especially boys) are not wearing seat-belts when collisions occur.

BCIRPU has noted that successful prevention programs require a combination of approaches and efforts from many disciplines, agencies and organizations such as public health, medical, law enforcement, political, community and others. BCIRPU has indicated a need for a comprehensive data collection system for motor vehicle crashes that goes beyond fatal crashes to present a more complete account of the magnitude of the burden of injuries. BCIRPU has suggested that data sources should include ICBC, the B.C. Vital Statistics Agency, B.C. Coroners Service, hospital separation data and emergency department data, as well as injury data provided by national surveys and targeted studies addressing specific traffic safety issues.

BCIRPU indicated that there is a need for regional traffic safety policies, developed at the regional and community level, taking into account local and specific traffic safety needs and resources.

3.3. Gap Analysis

The Traffic Services Study conducted a detailed analysis of motor vehicle crashes, hospitalization and coroner's data and an environmental scan of police traffic services, and consulted with the police, the public and key road safety stakeholders. This section analyses the gaps between the police, public and stakeholder views about road safety, police enforcement practices, and the provincial crash picture.

The following is a summary table of the perceptions by the public and the police of the most serious provincial traffic safety issues and the significant contributing factors leading to serious and fatal collisions.

Table 8: Public and Police Perceptions and Crash Analysis

Rank Order	Public Perceptions	Police Perceptions	Crash Data		
			Contributing Factors	% Serious Injury	% Fatal Crashes
1	Drinking and Driving	Impaired Driving	Driving without Due Care	34.5	35.4
2	Speeding	Aggressive Driving	Unsafe Speed	24.7	34.4
3	Traffic Congestion	Intersection Violations	Alcohol	24.1	27.3
4	Disobeying Traffic Lights	Speeding	Failure to Yield Right of Way	16.5	9.8
5	Lack of Driver Education/Training	Commercial Vehicle Offences	Weather	9.7	9.2

The following is a summary table of the crash profiles and the corresponding enforcement effort by the police, represented by violation ticket counts.

Table 9: Crash Profile Distribution and Enforcement Effort

Factor	Distribution of Collisions	% of Total	Police Enforcement	% of Enforcement
Stop/Yield Sign	14,113	23.7	18,871	2.7
Follow Too Close	11,798	19.8	4,472	0.6

Factor	Distribution of Collisions	% of Total	Police Enforcement	% of Enforcement
Speed Loss Control	11,442	19.2	588,033[20]	84.8
Automated Signal	11,283	18.9	14,833	2.1
Alcohol & Charge	6,375	10.7	61,185	8.8
Improper Turn	4,628	7.8	6,165	0.9
Total	**59,639**	**100**	**693,559**	**100**

Unsafe Speed

Crash data revealed that unsafe speed was a contributing factor in 16.3 per cent of all police-attended crashes,[21] ranking third overall. Significantly, unsafe speed was identified as a contributing factor in 34.4 per cent of fatal crashes and 24.7 per cent of serious-injury crashes, second only to driving without due care and attention at 35.4 per cent and 34.5 per cent respectively in fatal and serious crashes. (See Table 1, page 19.)

While the police and public both support speed enforcement, responses from the public and police surveys revealed a somewhat different picture. Police submissions in response to the discussion paper showed support for current speed enforcement activities, yet only a quarter of the respondents to the police survey rated speed as a high or very high priority for traffic enforcement; most cited it as a moderate priority.

Similarly, when asked unprompted to identify what they viewed as the most serious traffic safety issue in B.C., 20 per cent of the respondents to the public opinion poll cited speed-related concerns—equal to the number who cited impaired driving. Yet, when asked to rate the seriousness of eight traffic safety issues, an overwhelming majority chose impaired driving offences as the most serious, while speeding offences ranked sixth. Only driving while operating a cellular phone and seat-belt offences were rated lower by the public.

A closer review of the 108,239 police-attended crashes revealed 15 unique crash profiles, six of which were identified as amenable to enforcement-based countermeasures. The six profiles represented 55 per cent of total crashes. Speed and loss of control accounted for 19.2 per cent of the profile distribution. Analysis also showed that just over 50 per cent of collisions attributed to the speed profile resulted in fatality or serious injury, almost the same percentage attributed to alcohol. (See Table 2, page 19 and Table 3, page 20.)

Several public submissions claimed that drivers involved in serious crashes where unsafe speed is a factor are often impaired, contending that impairment dulls judgment and skill, making impairment the primary cause of the crash. However, crash data indicates that alcohol and unsafe speed together resulted in 3,600 (3.3 per cent) of 108,239 collisions, compared to 13,965 (16.2 per cent) crashes caused by unsafe speed alone and 10,176 (9.4 per cent) caused by alcohol alone.

The crash data confirms that speed is a serious public safety concern. However, more attention has been focused on speed enforcement relative to other high-risk traffic safety behaviours. In 1998, over 580,000 speed-related violation tickets were issued, accounting for 85 per cent of all violation tickets issued. Close to 292,000 of those were generated by photo radar. Of the remaining speed-related violation tickets, close to 89,000 (30 per cent) were issued as a result of ICBC-sponsored programs (TTEP). (See Table 9, page 24.)

Further, while ticket volumes indicate that police issue a significant number of tickets, the police survey showed that many officers will not issue a ticket until the driver is travelling well above the posted limited. This was particularly true outside major urban areas. The police survey found that

[20] This includes 292,000 photo radar tickets. While photo radar uses police resources to operate the vans, the technology allows for greater ticket volumes than conventional enforcement methods.
[21] 108,239 crashes were attended and reported by police from 1997 to 1999.

29 per cent of the respondents with traffic duties issue a ticket to a driver travelling 16 to 20 km/h over the posted speed limit in urban areas, while only 18 per cent of respondents issue a ticket for the same speeds in rural areas.

The crash profile data revealed that 39.3 per cent of all speed and loss of control collisions occur in a metropolitan area, and a further 28.4 per cent occur on highways. However, 61 per cent of all collisions occurring on rural roads and 46 per cent of all collisions occurring on highways are a result of speed and loss of control, while only 12 per cent of collisions in a metropolitan area are speed and loss of control collisions. (See Table 4, page 21.) Combined with the fact that the greatest proportion of fatal and serious-injury collisions occur in rural areas and on highways, it is clear that resources need to be aligned to ensure enforcement efforts are addressing the serious and fatal speed-related collisions occurring on rural roads and highways. Higher posted speed limits and less traffic congestion likely contribute to the higher proportion of more serious speed-related crashes on highways and rural roads than in more urban areas.

The crash profile analysis showed that two-thirds of crashes involving speed occur during the day, while two-thirds of crashes involving alcohol occur at night. While several public submissions in response to the discussion paper suggested photo radar enforcement during the daytime was a waste of resources, contending that most crashes occur at night, most collisions actually occur during the day as do most speed-related collisions. That said, speed-related crashes account for 25 per cent of all collisions occurring between midnight and 6 a.m. and 21 per cent of all collisions occurring between 8 p.m. and midnight. While most collisions tend to occur during the workday and rush hour, alcohol- and speed-related crashes are more prevalent during the weekend. Weekend days also tend to have a higher proportion of more serious crashes as well as a higher crash frequency. (See Table 5, page 21 and Table 6, page 22.)

Impaired Driving

Alcohol was identified as a contributing factor in 12.7 per cent of all police-attended crashes and ranked fourth overall. Alcohol was ranked third as a contributing factor for serious-injury and fatal collisions, 27.3 per cent and 24.1 per cent respectively, after driving without due care and attention and speed. (See Table 1, page 19.) In the crash profile distribution, alcohol accounted for close to 11 per cent of the enforcement based profiles. As with speed, about 50 per cent of these crashes resulted in fatality or serious injury. (See Table 2, page 19 and Table 3, page 20.)

The police survey and TSC focus groups showed that the police view impaired driving as a top enforcement concern and the public view it as the top road safety concern. Those who responded to the police survey rated impaired driving as the top priority to improve road safety and sixth as an overall enforcement priority. Both the police and public want strict enforcement and tough sentences to deal with impaired drivers.

While the crash data indicated that impaired driving is a serious public safety concern and both the police survey and public consultations showed that it should be considered as a top enforcement priority, enforcement efforts do not appear to be aligned accordingly. Although there has been a leveling in the number of driving while impaired Criminal Code charges in B.C. and an increase in the number of impaired driving charges that have been reduced to lesser offences, the number of 24-hour driving prohibitions issued has been steadily increasing. In 1998, over 44,000 24-hour prohibitions were issued, but only 7,600 ADPs and 9,200 Criminal Code charges were processed. This accounted for only 8.8 per cent of all traffic enforcement activity, as compared to 85 per cent aimed at speed enforcement. (See Table 9, page 24.)

There is strong support for CounterAttack. The program is effective at raising public awareness and discouraging drinking and driving. However, there are indications that it is not an effective enforcement activity: although 5.2 million vehicles went through 8,000 roadchecks in 1998, only 22 per cent of all apprehended impaired drivers were detected at CounterAttack roadchecks.

The crash profile data revealed that 28 per cent of all alcohol-related crashes occur between 8 p.m. and midnight, traditionally when CounterAttack roadchecks are operational. A further 39 per cent of all alcohol-related collisions occur between midnight and 6 a.m. Thirty-three per cent of all crashes occurring between midnight and 6 a.m. are attributed to alcohol, followed by speed at 25 per cent. (See Table 5, page 21.)

All those consulted during the study recommended a mix of highly visible roadchecks on major routes and random roadchecks on less-travelled routes and at other times. ICBC recommended that CounterAttack be expanded to all cities in the province with a population of more than 15,000. However, while 57 per cent of all alcohol-related crashes occur in metropolitan areas, nearly 20 per cent of crashes on rural roads involved alcohol, second only to crashes resulting from speed (61 per cent). In no other jurisdiction did alcohol figure so prominently.

The high incidence of alcohol-related crashes both in rural areas and between midnight and 6 a.m. suggests that enforcement practices need to be shifted or augmented. Focusing enforcement and awareness on locations and times to attain highest level of visibility may be effective for education and awareness; however, this neglects problem areas and does not act as a sufficient deterrent. CounterAttack cannot be relied on as the only tool to combat impaired driving in less populated areas; strategies focusing on different problem areas, such as late-night and early-morning target teams in marked vehicles concentrating on impaired driving, are required.

Intersection offences

Crash data revealed that failure to yield right of way was identified as a contributing factor in 19.5 per cent of all police-attended collisions and ranked second overall. Failure to yield right of way was reported as a contributing factor in 9.8 per cent of fatal crashes and 16.5 per cent of serious-injury crashes, fourth after driving without due care and attention, unsafe speed, and alcohol. (See Table 1, page 19.)

Ignoring a traffic control device was identified as a contributing factor in 6.8 per cent of all police-attended crashes, and ranked eighth overall. Ignoring a traffic control device was a contributing factor in 5.1 per cent of fatal collisions and 8.2 per cent of serious-injury crashes.

Of the six crash profiles analysed, stop/yield sign offences accounted for 23.7 per cent of the total, and automated signal violations accounted for 18.9 per cent. (See Table 2, page 19.) The greatest proportion of stop/yield sign and automated signal offences resulted in no injury or light to moderate injury. However, automated signal and stop/yield profiles accounted for 17 per cent and 15 per cent respectively of all the fatal collisions, and 22 per cent and 21 per cent respectively of all serious-injury collisions. (See Table 3, page 20.)

The police survey and public poll found a high level of concern around intersection violations such as failing to stop at red lights or stop signs. Several discussion paper submissions called for tougher penalties for drivers who disobey traffic signals and many stakeholders consulted raised concerns about traffic congestion fueling driver frustration and leading to unsafe behaviour, such as running red lights.

The crash data confirmed police and public concerns regarding intersection offences; however, enforcement efforts do not appear to support the serious nature of the problem. Intersection-related enforcement accounted for only approximately five per cent of total traffic violations, and of those, stop/yield accounted for 47 per cent, automated intersection accounted for 37 per cent, and improper turns accounted for 15 per cent. Some police enforcement actions take more effort than do others, and to a large degree the low proportion of tickets issued may be due to the fact that traffic laws at intersections are labour-intensive and difficult to enforce. The introduction of red-light camera enforcement in B.C. is one tool intended to enforce intersection non-compliance more effectively.

The crash profiles revealed that the greatest proportion of stop/yield crashes occur in metropolitan areas. The same was true for automated signal collisions. The crash profile data also showed that almost half of all collisions in metropolitan areas and large cities were due to ignoring an automated signal or ignoring a stop/yield sign. Ignoring stop/yield signs was the greatest factor in all large and small city crashes (30 per cent in each jurisdiction). Often, these intersection crashes occur in the daytime and during rush hour. (See Table 4 and Table 5, page 21.)

Driving Without Due Care and Attention

Driving without due care and attention was identified as the most significant contributing factor in 29.3 per cent of all police-attended collisions. It was also the primary contributing factor in 35.4 per cent of all fatal collisions and 34.5 per cent of all serious-injury collisions. (See Table 1, page 19.)

While driving without due care and attention appears to be the most significant factor in collision causation, it is ill defined and poorly understood. As a result, driving without due care and attention tends to be a "catch-all" category on collision investigation reports encompassing a range of high-risk driving behaviours.

In 1998, only 7,300 tickets were issued for careless driving under the Motor Vehicle Act and only 700 Criminal Code charges were processed for dangerous operation of a motor vehicle. Considering that careless driving is the top contributing factor in all collisions, as reported by police, enforcement levels are low compared to other traffic-related offences. It may be that the elements associated with driving without due care are not clearly understood and that no specific countermeasures exist for police to target behaviours associated with careless driving. It is possible that actions coded on the collision investigation form, such as driving without due care and attention, result in violations for speeding or alcohol involvement.

Occupant Restraints

While occupant restraint use is not a contributing factor to a collision, it has been proven that occupant restraints do save lives.

The police survey found that officers viewed occupant restraints as the lowest priority for enforcement; the public poll showed that British Columbians viewed seat-belt offences as the least serious traffic offence. Officers with traffic duties who responded to the police survey were more likely to issue a seatbelt ticket than other police officers; only 46 per cent of those respondents viewed seat-belt enforcement as a high or very high priority.

According to Transport Canada reports, B.C.'s wear rate is reported to be 89.2 per cent. In 1998, police officers issued over 40,000 tickets for seat-belt violations. However, almost 10 per cent of those tickets were issued during the one-week seat-belt campaign held every year. Clearly, more can be done in terms of seat-belt enforcement.

Table 10: Restraint Device Use by Crash Type

	Injury Type %				
	No Injury	Light to Moderate	Serious	Fatal	Overall
% Using Restraint Device	95.0	90.6	75.5	61.5	92.2

Respondents to the police survey also perceived the rate of seat-belt use to be lower than the reported wear rate. Two-thirds of the respondents believed the provincial seat-belt wear rate as

between 70 and 80 per cent. Two-thirds of the respondents also correctly perceived that wearing rates in rural B.C. are lower than the provincial average.

Caution should be used in interpreting figures associated with restraint device use because police officers are generally not present at the time of the crash and have to take the word of the crash participants. As a result, the reported category has 20.1 per cent missing values. Despite the problems with data quality, the crash data for fatal collisions is quite telling. In fatal crashes on rural roads, 60 per cent of the dead occupants were unbelted, while only 30 per cent were unbelted in urban areas.

Table 11: Restraint Device Use in Fatal Crashes by Jurisdiction Type

Vehicle Occupants	Rural Area N=78	Highway N=475	Small City (7 000+) N=103	Large City (25 000+) N=54	Metro N=257	Total N = 966
% Fatal No Restraint	59%	29%	38%	37%	30%	33%
% Fatal No Restraint & Ejected	27%	12%	8%	13%	10%	13%

Other Issues

The police and public have a wide variety of concerns related to traffic safety. When asked unprompted to name what they consider to be the most important traffic safety issue facing B.C., respondents to the public poll listed a total of 31 different issues. While impaired driving and speed topped the list, the list also included things like poor/careless drivers, congestion, improperly following traffic lights, young drivers, elderly drivers, new drivers, use of cell phones while driving, cyclists, pedestrians and vehicle maintenance.

While many people view large commercial trucks as a major traffic safety concern, the crash statistics showed that only 5.7 per cent of all police-attended collisions involved heavy trucks, 30 per cent were single-vehicle crashes and almost 65 per cent resulted in no injury. Only seven per cent of all serious-injury and fatal collisions involve heavy vehicles. Nevertheless, enforcement measures are still required, particularly as the crash profile data shows that close to a third of heavy vehicle crashes are the result of speeding.

There is some concern among the public about the use of a cellular phone while driving. Some would like the police to have adequate tools (including new legislation) to deal with situations where drivers are distracted and risk a crash. Others feel that raising public awareness through education may be a more effective and efficient use of scarce public resources.

4. CHALLENGES

4.1 Enforcement Activity

Responding effectively to public safety issues on our highways and roads requires a co-ordinated provincial and local approach where strategic priorities are set and enforcement activities are focused on strategic objectives. However, it is difficult for police agencies to carry out strategic traffic enforcement without access to timely, reliable data that pinpoints high-crash sites and high-risk driving behaviours.

Speed Enforcement

Photo radar is one enforcement tool used by police to address speeding. While the goal of photo radar is to reduce traffic speed, thereby reducing the number and severity of speed-related collisions, this can only be accomplished if it is deployed strategically at high-crash locations where speed is determined to be a significant contributing factor to the collision. Currently, local police on behalf of their community identify possible sites, but without accurate crash data, some locations identified by the local police may not in fact be high-crash, speed-related locations.

While photo radar has been effective in reducing speeds at enforcement sites, it has not had the same impact on speeding provincewide. Many drivers know where vans are located and may only be slowing down at the site locations. The existing program does not have enough vans to provide widespread deterrence, and in some areas, such as the north and the interior, the equipment is less effective because considerable time is spent travelling between sites.

Unlike photo radar cameras that can ticket many offenders quickly and efficiently, conventional speed enforcement is limited because an officer can stop only one vehicle at a time. Not all violators are ticketed.

Targeted Traffic Enforcement Partnership (TTEP) is another program aimed at reducing speeding. While the program aims to target all aggressive driving behaviours, such as following too close, speeding, intersection infractions and unsafe lane changes, violation ticket volumes indicate that police are focusing on speeding offences. Local police managers prepare operational plans for TTEP, but data that identifies the locations, causes, and time and day of week of crashes is required for building a strategic enforcement response is required. Currently, TTEP is typically deployed primarily on major traffic corridors during regular hours.

With the introduction of TTEP, base traffic enforcement by local police and highway patrol units has declined. As a result, the benefit of increased police visibility and enforcement from the program may be reduced. Operating traffic enforcement on an overtime basis is neither desirable nor sustainable.

As evidenced by the number of violation tickets issued for speed-related offences, speed enforcement is the predominant police enforcement activity. Yet despite this focus, speed as a contributing factor to crashes, including serious-injury and fatal crashes, continues to rank within the top three of all contributing factors. This suggests that police lack the proper data for deploying resources strategically to address speed-related crash problems. It may also suggest that insufficient police resources are being deployed to address speed-related crash problems.

Impaired Driving Enforcement

As a public awareness tool aimed at discouraging drinking and driving, Enhanced CounterAttack is a highly visible and highly effective program. Its success depends on high visibility, with most roadchecks located on roads with high traffic volumes.

Based on the information collected for this study, it appears that the effectiveness of Enhanced CounterAttack at enforcing impaired driving is limited. Impaired hard-core offenders are frequently able to avoid roadchecks by using less-travelled routes where local police lack the resources to enforce drinking and driving. Because of the time required by police to process a Criminal Code impaired driving charge, insufficient police resources, implicit or explicit pressure to move vehicles through roadchecks, and police frustration with the judicial system, many officers are more inclined to issue a 24-hour driving prohibition than to pursue criminal charges.

With competing demands for police resources, the Enhanced CounterAttack program operates by paying police officers on an overtime basis. The use of overtime creates additional challenges for police agencies, with police officers becoming dependent on overtime and/or burning out from overwork, as well as a diminished emphasis on impaired driving enforcement outside of the Enhanced CounterAttack program.

The decreasing number of Criminal Code impaired driving charges proposed by the police is especially troubling, particularly as alcohol continues to be ranked among the top five contributing factors in crashes. A challenge for police agencies is to develop strategies, based on crash and other data, that focus police enforcement efforts on identifying, apprehending and processing impaired drivers.

A further challenge the police face involves persons driving while impaired by substances other than alcohol. While the extent of drug impaired driving is not known, few police officers in the province have received training as drug recognition experts or in standard field sobriety testing.

Intersection Enforcement

While red-light cameras are potentially a highly effective enforcement tool available to police for addressing intersection offences, it is still too early to draw any conclusions about the program's success. While technology can be costly, conventional enforcement can be dangerous and the most effective enforcement method requires two officers at the intersection.

Driving Without Due Care and Attention

Driving without due care and attention ranks as the primary contributing factor for all collisions, including serious and fatal collisions, yet it is ill defined. Driving without due care tends to be a "catch-all" category on collision investigation reports, encompassing a range of high-risk driving behaviours as well as speeding and alcohol involvement. Since the elements associated with driving without due care are not clearly understood, it is very difficult to develop countermeasures.

Occupant Restraint Enforcement

Occupant restraint devices are the most effective way to save a life, yet half the police view occupant restraints as a low or very low priority for enforcement. The public also does not view seat-belt enforcement as a high priority for police. The high rate of unbelted occupants in fatal crashes, especially in rural parts of the province, is a concern. The challenge is to reinforce the importance of seat-belt use among both the police and public. Targeted enforcement programs have proven to be successful. In 1996, the CCMTA noted that seat-belt use would not improve unless serious action was taken, such as imposing demerit points for non-use of seat-belts, and

removal of all seat-belt exemptions. All provinces and territories with the exception of PEI, Manitoba, Alberta and B.C. use demerit points.

Fine Collection

The public's confidence in the justice system is undermined when police enforcement action is not followed through with fine collection. Enforcement is more difficult if offenders do not bear the consequence of their actions. While not an issue that the police control, the considerably high rate of offenders who do not pay their fines creates a challenge in terms of the importance of their enforcement activity.

4.2. Organizational Structure

From a provincial perspective, traffic service delivery is fragmented, making it difficult to respond strategically to road safety problems.

With the RCMP, organizational effectiveness is diminished because of a lack of co-ordination between the municipal and provincial sections. RCMP traffic services operations involve a number of different reporting relationships. The provincial Traffic Services Officer is responsible for strategic direction of all traffic programs, yet the municipal traffic units and half of the provincial highway patrol units report to their respective detachment commanders. The remaining provincial highway patrol units report to the Commanding Officer of "E" Division. The fact that the Traffic Services Officer and the Traffic Services NCO responsible for strategic program delivery for traffic have no direct line of authority over traffic resources limits their ability to co-ordinate traffic services to meet strategic goals. They also do not have the resources to develop strategic policies for traffic services in the province.

Detachment Commanders may have different operational priorities because of competing demands within their communities and may reassign officers from traffic units to address those priorities. The result is a checkerboard approach to traffic services across B.C. While some detachments aim at delivering strategic services, it is more difficult for others where there is a lack of local community support and lack of data analysis.

The reporting structure for independent municipal police departments is more straightforward. The Chief Constable is responsible to the community through the police board that is chaired by the mayor. If support for traffic services in the community is weak, the Chief Constable may find it difficult to address high-risk traffic safety issues. The challenge becomes even greater if there is a lack of reliable data and capacity in the police agency to obtain and analyse road safety data Traffic services delivery is often reactive, responding to specific neighbourhood concerns, rather than proactive, delivering strategic services that can improve overall community safety.

Although the Integrated Traffic Camera Unit (ITCU) works in partnership with all police agencies, because of a lack of integrated planning it is difficult for the traffic camera programs to assist local police agencies in strategic enforcement. Some police agencies do not understand how photo radar can be used to bolster local traffic services, and those that do find it difficult to work it into a local operational plan given conflicting operational policies.

4.3. Resourcing

While almost 100 of the total authorized traffic positions in both the RCMP and independent departments were reported as vacant, the number of officers actually working in traffic at any given time is likely significantly smaller than reported. As with many other areas of policing, traffic units have a high vacancy rate.

The problem of high vacancy rates is compounded when traffic services are used as a support function for other policing activities. Traffic officers are often redeployed, both temporarily and permanently, to general duty to maintain a front-line policing response. Even though every general duty patrol officer is expected to deliver traffic services, unless managers hold patrol officers accountable for traffic services, this rarely happens.

In some cases, traffic positions may not be listed as vacant on paper, but for practical purposes the positions may be unfilled. For example, in the RCMP when an officer is on extended medical leave, the position cannot be filled so it is moved to traffic and remains vacant. On paper, a traffic unit may appear to be fully staffed when in fact it is not. Traffic officers are also seconded to other projects or assigned extra duties, such as court liaison and exhibits, which reduces the officer's time spent on traffic duties. As a result of vacancies, especially in the RCMP, many detachments do not have sufficient resources to deliver strategic traffic services. This impacts their ability to provide enforcement at high-risk times such as late at night or on holiday long weekends.

In some independent municipal departments, new traffic positions approved by city council may be assigned to general duty with the explanation that patrol officers also handle traffic-related duties. The lack of dedicated traffic officers makes it difficult to implement a strategic traffic services plan.

4.4. Training

All uniformed police officers in B.C. are expected to provide traffic services as part of their daily duties, regardless of whether they are with an RCMP detachment or an independent municipal police department. Without adequate training, including having information on Criminal Code motor vehicle offences and B.C.'s Motor Vehicle Act and relevant regulations, they may not be able to handle these traffic duties competently or understand fully how traffic enforcement contributes to community safety.

The RCMP and the independent municipal police departments each provide traffic services training for recruits and for officers moving into B.C. However, the amount and the standard of the training differ between the RCMP and the independent departments. The Justice Institute's Police Academy provides broad training in traffic services for new municipal officers, but recruit-level traffic training is minimal at best. RCMP recruits receive limited traffic training at the Training Academy in Regina and then, once they arrive in B.C., they have to rely on the officer assigned as their on-site trainer for additional training. A recruit's exposure to provincial traffic enforcement occurs to any meaningful degree in cases where the RCMP's on-site trainer emphasizes traffic in the training. This rarely occurs.

Officers attending serious or fatal crashes are not always trained in proper collision investigative techniques, making it more difficult for them to know when they should seek the assistance of collision reconstructionists or collision analysts. Officers without this training are also less likely to collect the information needed to conduct the crash investigation and to help to identify the factors that led to the collision.

Officers interested in pursuing a policing career in traffic frequently find few opportunities for advanced traffic training or promotion within traffic sections. In some agencies, officers who have taken advanced traffic training are often transferred to other units, resulting in the loss of expertise and knowledge that would help address local traffic services issues. Often, managers with limited traffic experience or training are transferred into traffic units, making it more difficult for them to engage in the community problem solving needed to identify and develop a strategic plan for traffic services delivery.

Currently, only limited training is available in B.C. to help traffic officers and managers learn how to analyse collision data to prepare operational plans that identify and solve problems, and how to measure the results and work with their community to make necessary adjustments.

4.5. Equipment and Information Technology

Technology is constantly pushing police agencies to streamline and automate many functions and processes. To deliver strategic traffic services efficiently and effectively, police need the right equipment. This can include everything from flares and safety vests to computers and red-light cameras. In other cases, mobile workstations located in police vehicles can be used for both routine investigations and maintaining high police visibility.

Strategic traffic enforcement is built on the constant collection and analysis of data. With few exceptions, traffic units do not have access to information about where and why crashes are occurring, how enforcement activities are affecting the crash picture, and how their jurisdiction compares with others in B.C. or elsewhere in Canada. Information technology is no different than any other traffic enforcement tool. The right equipment can help managers identify issues quickly, address them strategically, measure results effectively and communicate the results to their communities.

With budget pressures at all levels of government, traffic managers have tended to rely on ICBC funding for acquiring new enforcement equipment. Police managers need to be able to project capital requirements for equipment replacement. They need information that demonstrates the direct link between improved community safety and the use of new, and sometimes costly, equipment.

4.6. Information Management

To address high-risk traffic safety issues, traffic managers need access to timely, reliable data about their own enforcement area, adjoining districts and the province as a whole. Without reliable data, problems may not be identified or if identified, underestimated. Reliable measurements can provide the impetus for change and assist in budgeting, strategic planning and tracking of successful initiatives.

Existing information management systems do not provide this information. The Police Information Retrieval System (PIRS) does not offer the detailed information needed to develop and implement a strategic operational plan for traffic services. The B.C. Traffic Accident System (TAS) has more relevant data for B.C. traffic managers, but is generally at least one year out of date. TAS is also limited as its data is based only on police-attended injury and fatal collisions, and with police attending fewer crashes, year-to-year comparisons are not possible. There are also no provincial standards available to ensure that the information police collect is thorough and identifies all the key issues.

The Police Crash Process Review is a sub-project of the Crash Crime Contravention Project, a joint endeavour by the police and ICBC focused on finding ways to improve crash data collection and delivery of useful information to traffic managers. However, the process has proven to be extremely complex and no immediate resolution is in sight.

Because of the lack of timely and reliable data, traffic managers tend to rely on anecdotal information and the perceptions of traffic officers on the street rather than actual statistical information to determine deployment strategies. Some traffic managers have set up their own local data systems, but each of these programs is independent of others, capturing only individual data fields and, in most cases, varying in detail. As a result, they cannot provide the broad strategic picture needed to deliver effective traffic strategies.

In addition to PIRS and TAS, a number of B.C. agencies collect data on traffic crashes, including ICBC, Ministry of Attorney General, provincial and local health authorities, the B.C. Vital Statistics Agency and the B.C. Coroners Service. However, these organizations do not work together to present a provincial profile of crashes that could be used to support an effective enforcement response.

4.7. Performance Measures

Police officer performance evaluation is not currently aligned with community-based problem solving and service delivery. This may perhaps reflect the perception that problem solving is not the responsibility of the service delivery component of policing. Moreover, even under ideal circumstances it is difficult to measure the effectiveness of traffic services delivery, and it is even more difficult when access to timely, reliable data needed to measure and analyse the effectiveness of enforcement activities is limited.

At present, the police can and do measure quantity (e.g., the number of tickets or warnings issued or the number of hours invested in a specific type of enforcement). This emphasis on quantitative rather than qualitative measurements encourages traffic managers and officers to focus on easier-to-measure enforcement activities, rather than on the most effective activities.

B.C. also has no provincial measurements that would enable local police agencies to compare their performance with other policing jurisdictions across their region or across the province.

Funding partners, the public and police agencies themselves see a critical need for performance measures that can be used to evaluate public safety outcomes. Such measures are crucial for demonstrating how traffic law enforcement, if focused strategically, can reduce the rate of crashes, especially serious-injury and fatal crashes.

4.8. Education and Awareness

The general public is concerned about road safety, but many people believe that it is only a few 'bad' drivers that cause most crashes. Because there is a high degree of public respect for the police and their role in keeping communities safe, the way police agencies view traffic services can have an impact on public opinion. If the police see traffic services as relatively unimportant, the result may be the creation of a perception that it is acceptable to ignore traffic laws.

Police agencies do not have the resources or the information to handle public education and awareness on the issue of road safety.

5. RECOMMENDATIONS

The key recommendations supported by the study are:

1. The focus and priority of traffic services within the policing community must be increased significantly to combat the unacceptably high rate of deaths and injuries on British Columbia's roads and highways.

2. Police must lead all traffic enforcement initiatives, including photo radar, intersection safety cameras, CounterAttack and speed and aggressive driving enforcement.

3. The enhanced enforcement programs, funded by ICBC, should continue and, under certain conditions, expand. However, all police agencies must address the decline in base traffic services and guarantee that the enhanced enforcement funding is not used to replace base traffic services.

4. Local communities and road safety organizations are key partners in solving road safety problems.

5. Police agencies are accountable to their local communities and to all British Columbians for adopting enforcement strategies that reduce deaths, injuries and crashes. They must set and meet performance targets to demonstrate this commitment.

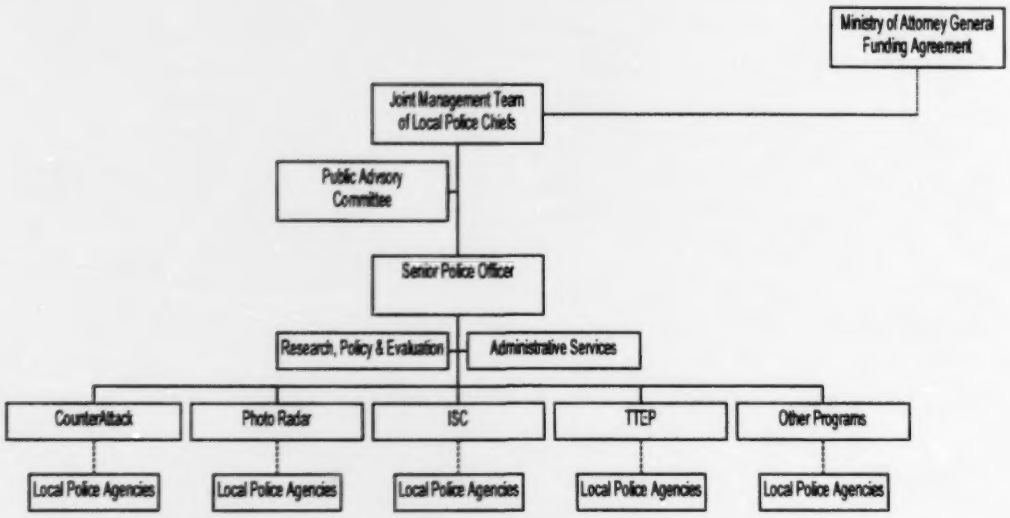
6. Access to timely and reliable road safety data by police, coupled with a capacity within police agencies to analyse data and develop strategic responses to road safety problems, is crucial if police agencies are to meet performance outcomes.

To address these recommendations, it is further recommended that:

1. The province establish an independent Strategic Enforcement Unit (SEU) led by police with input from a public advisory body. The SEU would:
   - work with local police agencies to develop short- and long-term traffic safety plans based on research, data and outcomes
   - deliver enhanced enforcement programs, including photo radar, intersection safety cameras, CounterAttack and Targeted Traffic Enforcement Partnership, in the lower Mainland and south Vancouver Island and co-ordinate these services with the RCMP highway patrols in all other areas of the province
   - have a research, policy and evaluation section with the capacity to analyse road safety data, use the data to develop strategic deployments, measure success based on recognized performance outcomes and report publicly on its success
   - have input and advice from a public advisory body composed of community leaders, road safety advocates and other public interest representatives
   - be led by a senior Officer in Charge from either the RCMP or municipal departments and staffed by seconded police officers from both the RCMP and municipal departments
   - be governed by a Joint Management Team of local police chiefs who set the goals, priorities and objectives for the unit
   - be funded by the Ministry of Attorney General as part of the multi-year performance based funding agreement to be developed with ICBC
   - be required to set and meet performance targets as a condition of continued and/or increased funding.

The proposed organizational structure would look as follows:

Strategic Enforcement Structure



It is further recommended that the RCMP receive enhanced enforcement funding for the delivery of enhanced programs outside of the Lower Mainland and south Vancouver Island, subject to the same conditions set out above.

2. With reference to photo radar, it is recommended that:
   - to be effective and efficient, use of the current van fleet be restricted to sites that have a high incidence of speed-related crashes and where traffic patterns and flow make it unsafe or impractical to use conventional speed enforcement
   - be operated solely by the police, preferably the SEU, who would be responsible for setting policy direction and performance measures and communicating results to the public
   - be available to all communities where its use is supported by data analysis and by the Detachment Commander or Chief Constable
   - where photo radar is used, it should also be used to identify traffic corridors where speed surveys should be conducted—for example, where speed limits are low and drivers are consistently violating those limits.

3. With reference to funding, it is recommended that:
   - the provincial and local governments review base traffic service levels and funding agreements
   - the proposed SEU and the RCMP (for enhanced enforcement) be funded by the Ministry of Attorney General through a multi-year performance-based funding agreement with ICBC
   - a continuation and/or increase in ICBC's investment in enhanced traffic enforcement be contingent on:
     - base traffic levels being established across the province to a mutually agreed upon level
     - traffic safety business plans by the RCMP and the municipal departments should be required before enhanced funding is provided, and
     - performance measures being mutually agreed upon to ensure safety results, which would be reflected in a reduction in crashes

- the proposed SEU and the RCMP would be accountable for showing effective utilization of this funding by meeting agreed-to performance measures.

4. With reference to performance measures, it is recommended that:
   - all police agencies, including the SEU, set annual performance targets that will measure their success in achieving road safety outcomes
   - performance measures with key outcomes be incorporated into traffic services business plans developed by all police agencies
   - the Ministry of Attorney General, police and ICBC agree on performance measures that will provide satisfactory and reliable descriptions on the level of base and enhanced traffic enforcement and the public safety outcomes of both base and enhanced traffic enforcement; examples of performance measures to be developed could include:
     - rate of crashes by jurisdiction (including serious-injury and fatal crashes)
     - rate of contributing factors in crashes
     - rate of compliance with road safety regulations (e.g., seat-belt wearing rates)
     - rate of persons driving while impaired
     - skills, abilities and training of SEU, RCMP and local police in effective traffic safety measures
   - the Ministry of Attorney General issue an annual public report on the state of road safety in B.C.

5. With reference to training, it is recommended that:
   - all RCMP and municipal recruits receive standardized traffic services training at either the Justice Institute (Police Academy) or the RCMP's Fairmont Academy
   - the training address Criminal Code motor vehicle–related offences and the Motor Vehicle Act and relevant regulations
   - all police managers be trained on "best practices" for road safety
   - traffic and Highway Patrol managers be trained in problem identification and problem solving community road safety problems
   - traffic officers receive enhanced crash investigation training, with a particular emphasis on crash causation.

6. With reference to information management, it is recommended that:
   - all police agencies have reliable and timely data to identify road safety problems and develop strategic solving operational plans
   - ICBC make police access to crash data a top priority
   - the policy, research and evaluation section of the SEU have access to all relevant data, including TAS, hospitalization, B.C. Vital Statistics Agency, coroner and emergency room, and PIRS/OSR data
   - the SEU assist the RCMP Highway Patrols by providing data analysis and research for their use in developing strategic operational plans
   - police ensure data integrity standards are set and met when investigating and reporting on crashes and all traffic-related offences.

7. With reference to improving the effectiveness of traffic services from the provincial perspective, in addition to the measures recommended above, it is further recommended that:
   - enforcement activities focus on the contributing factors of all crashes, and especially the serious-injury and fatal crashes, to close the gaps in enforcement identified in the study
   - the SEU undertake operational research projects on a regular basis to identify provincial road safety issues—for example, rural seat-belt wearing rates
   - police agencies, including the SEU, involve community partners, including road safety and injury prevention organizations, in developing strategic plans
   - the MV6020 form be amended to allow police to include emerging road safety issues that may play a role in crashes (e.g., use of cellular phones).

8. With reference to implementing these recommendations, it is recommended that:

- the Attorney General appoint an interim Joint Management Team for the SEU consisting of police chiefs, to decide all matters relating to the implementation of these recommendations
- the Ministry of Attorney General support the work of the interim Joint Management Team until such time as the SEU is established and resourced.

APPENDIX A: TRAFFIC TRAINING COURSES

The following is a list of traffic services courses available to all police agencies in the province:

Fairmont Police Academy, Vancouver
Accident Investigation—Level II
Advanced Driving Course
Aircraft Observers Course
Alcometer S-L2 (RSD Operators)
Alcometer S-L2 (RSD Calibrators)
Alcosensor IV DWF (Operators)
Alcosensor IV DWF (Calibrators)
BAC Datamaster C Conversion Course
BAC Datamaster C Certification Course
BAC Datamaster C Supervisors Course
Commercial Vehicle Enforcement
C.V.S.A. Commercial Vehicle Inspection Course
Drug Recognition Expert*
Evidentiary Breathalyzer
Laser
Motorcycle Operators
Radar Multi-directional Course
Radar Stationary/Moving Course
Standardized Field Sobriety Testing*

* These courses are only offered at Fairmont Academy and are funded by ICBC.

Justice Institute of British Columbia
Accident Investigation—Level I
Accident Investigation—Level II
Alcometer S-L2 (RSD Operators)
Alcometer S-L2 (RSD Calibrators)
BAC Datamaster C Conversion Course
BAC Datamaster C Certification Course
BAC Datamaster C Supervisors Course

The following is a list of specialized Collision Investigation Courses that are co-ordinated provincially by the Fairmont Academy:

Fairmont Police Academy, Vancouver
Accident Investigation Level III*
Commercial Vehicle Accident Investigation
Autosketch *(Computer Assisted Drawing)*
Crime Scene Video *(Traffic Scenes)*
Pedestrian Collision
Survey Principles for Collision Analysis**

* Only offered when ICBC funding is available.
** Funded by RCMP and ICBC, taught at BCIT under contract.

Canadian Police College, Ottawa, Ontario
Collision Investigation Level III*—Collision Analysis
Collision Investigation Level IV*—Collision Reconstruction

* Course candidates are solicited nationally from municipal police departments and the RCMP

APPENDIX B: SUMMARY OF CONSULTATIONS

Police Perceptions and High-Risk Traffic Safety Issues

How Important Is Traffic?

Participants in the BCACP Traffic Safety Committee (TSC) working sessions said they believed traffic enforcement saves lives, reduces injuries and protects property by making roads safer. They also said that traffic issues are a concern to most communities and that a visible police presence enhances community safety and discourages crime.

Yet committee members said they felt police managers view traffic as a low priority and often draw on traffic resources to fill general duty vacancies or take on other non-traffic duties. This view was also expressed in submissions provided by police in response to the discussion paper.

In the police survey, 88 per cent of the officers with traffic duties who responded saw traffic safety as a high or very high priority, while 46 per cent of senior management and 44 per cent of NCOs viewed it as such. Less than a third of general duty officers viewed traffic safety as a high or very high priority.

While close to half of senior management who responded to the survey said they viewed traffic as a high or very high priority, about the same number of all respondents thought police management considered traffic a moderate priority. More than half of the traffic officers and a quarter of general duty officers and NCOs believed traffic was a low or very low priority to police management.

At the TSC focus group session, members were asked to predict what would happen if dedicated traffic positions were eliminated. They said that there would likely be more crashes with greater severity, more deaths and more injuries, and that roads could become more congested, with an increase in road rage and aggressive driving. Members also stated that there could potentially be economic implications if tourists and residents began to avoid driving in B.C. because of safety concerns.

TSC focus group participants also said that fewer police on the road would probably lead to more crime and higher rates for automobile insurance. They said that government could feel the pinch from increased medical costs and decreased fine revenue, and that B.C. could lose its crash investigation and enforcement expertise.

The focus group participants also identified traffic as an excellent way to build community partnerships, because their work involves community consultation and problem solving in partnership with traffic engineers.

Police Resources

Many officers who submitted comments as a result of the discussion paper were concerned about what they perceived to be a deterioration of traffic services in B.C. Most supported the enhanced enforcement programs, such as CounterAttack and the Targeted Traffic Enforcement Partnership, but said they worried that this was leading to reductions in regular enforcement and allowing municipalities to ignore their traffic responsibilities.

However, the B.C. Federation of Police Officers said the enhanced programs allow more general duty officers to work in traffic, increasing their knowledge and understanding. The federation said the enhanced enforcement also provides funds that allow police agencies to purchase new traffic equipment.

Close to 40 per cent of all police survey respondents said the number of officers available for enforcing traffic laws is not adequate. A few respondents (six per cent) said that this number is more than adequate. The rest said the number of officers is somewhat adequate or adequate.

It should be noted that traffic officers were more likely than all survey respondents to say that the number of officers available for traffic enforcement was not adequate. RCMP members were more likely to say this than respondents from municipal departments.

Several of the discussion paper submissions noted that there is little traffic enforcement on busy holiday weekends because of limited police budgets. Other submissions expressed concern that there are fewer officers available to attend collisions, which means they cannot lay charges or collect data to support a strategic approach to traffic enforcement.

Police Organization

One discussion paper submission suggested that B.C.'s Attorney General provide a clear provincial mandate that sets out the importance of traffic law enforcement and holds police executive and senior managers accountable[22]. There were also calls for standards to help local police measure productivity and effectiveness as well as provide a benchmark to determine the optimum size of an effective traffic unit in different-sized communities.

Several discussion paper submissions offered suggestions around traffic unit organization. One recommended an integrated provincial traffic department similar to the existing Integrated Traffic Camera Unit, possibly with a chief who reports to the Attorney General. This would give dedicated traffic officers some security that they would not be asked to take on other duties, and at the same time allow them to return to their department/detachment if they wanted a change in assignment. Participants in the BCACP traffic safety meeting also supported a special traffic unit so officers could concentrate on traffic activities without being asked to take on non-traffic duties.

On the other hand, the B.C. Federation of Police Officers told the study that training general duty officers to handle traffic duties would be more effective than a specialized unit, because it increases the number of officers that are available to deliver traffic services and increases flexibility.

Other organizational models proposed by discussion paper submissions included enforcement teams like the Ontario Provincial Police Highway Rangers or an integrated model with police managing policing matters and civilians appointed under the Police Act managing regulatory functions.

Regardless of the model selected, both the BCACP traffic safety participants and many of the police submissions said it is important to have experienced traffic officers managing traffic operations.

Impaired Driving

Respondents to the police survey were presented with a list of enforcement activities, both traffic and non-traffic, and asked to select a priority for each. The results showed impaired driving as the top priority for traffic enforcement and sixth priority overall—behind murder, sexual assault, kidnapping, robbery and domestic violence, and ahead of break and enter, assault and arson. Respondents also identified impaired driving as their biggest concern when asked to place

[22] The Attorney General currently sends a letter to the Commanding Officer, RCMP "E" Division, setting out the provincial policing priorities.

priorities on the enforcement of various traffic offences according to what is most likely to improve traffic safety.

However, in response to the discussion paper, many police officers made it clear that they feel they cannot deal effectively with drivers suspected of being impaired by alcohol or drugs until improvements are made to the entire system—from apprehension to sentencing. A number of submissions supported specialized Crown counsel and some called for more training for both police and Crown counsel.

The survey asked officers with traffic duties to indicate the action they would take if they stopped a driver they thought was impaired. More than half said they would submit a charge of impaired driving under the Criminal Code. Of those who said they would not submit a charge, 42 per cent stated they frequently issue a 24-hour prohibition under section 215 of the provincial Motor Vehicle Act and 39 per cent indicated they always issue a 215.

From a supplied list, the reasons survey respondents gave for not submitting a charge under the Criminal Code for impaired driving included taking too much time to process a Criminal Code impaired driving charge (62 per cent); a 215 gets the driver off the road (61 per cent); insufficient staff available to process the impaired driver (49 per cent); driver likely to be found not guilty of charge (40 per cent); driver likely to plea to a lesser included offence (36 per cent). The most frequently cited reason freely given by those who did not generally submit a charge of impaired driving was lack of support from the courts.

The Federation of B.C. Police Officers supported what the survey found by telling the study that police tend to use section 215 because it takes too long to process an impaired driving charge and in many cases the charges are reduced. The federation recommended that the 24-hour prohibitions include a penalty such as a fine or temporary vehicle impoundment.

The survey asked officers to measure how effective different police actions—ranging from verbal warnings to submitting a report to Crown counsel—were in deterring traffic offences. More than three-quarters of the respondents said they believed that issuing an administrative driving prohibition and submitting a report to Crown counsel were effective ways to deter impaired driving.

Some police submissions said that there is little point in spending time processing an impaired driving charge without assurance that the charge will proceed. One submission suggested that Crown counsel provide a written rationale before reducing an impaired driving charge and further said that once the criminal information has been sworn, the accused should either plead guilty to the charge or go to trial.

The study received submissions from officers who said they would issue 90-day administrative driving prohibitions with a 24-hour prohibition if they could use an approved roadside screening device to initiate this action. Some also said they preferred a lower threshold of 50 mg% as the basis for an administrative driving prohibition.

Police submissions in response to the discussion paper show most officers support the highly visible CounterAttack roadchecks. Some called for special drinking-driving patrols to supplement CounterAttack by working on less-travelled routes at times when there are more likely to be impaired drivers

The B.C. Federation of Police Officers also noted that if more police were trained as drug recognition experts, they could deal with drivers who may be impaired by a substance other than alcohol.

Unsafe Speed/Aggressive Driving/Intersection Offences/Occupant Restraint Offences

While respondents to the police survey identified impaired driving as a substantially higher priority than all other traffic offences, most also saw aggressive driving and intersection violations as important for enforcement. Aggressive driving appeared as the tenth priority among traffic and non-traffic enforcement activities. When invited to suggest other traffic offences that merited high-priority attention, respondents chose following too closely, undue care and attention and vehicle inspection.

The police survey found that only a quarter of those who responded rated speed enforcement as a high or very high priority; most saw it as a moderate priority.

Police submissions to the discussion paper showed support for the current emphasis on speed enforcement, with one claiming unsafe speed likely causes more crashes than reported because it leads to other dangerous actions such as unsafe lane changes or running red lights.

One submission recommended using speed enforcement to slow down traffic as vehicles near an intersection and reduce the risk of red-light running, and another called for public education to convince drivers that speeds need not be excessive to be unsafe.

In the police survey, officers with traffic duties were asked how much over the speed limit a driver had to be travelling before they would issue a ticket. About half said they would issue a ticket at 21 to 25 km/h over the limit in either an urban or a rural area. Almost 30 per cent said they would issue a ticket to a vehicle travelling 16 to 20 km/h over the limit in an urban area and almost 20 per cent said they would issue a ticket at that threshold in rural areas. In other words, officers are more likely to issue a ticket at lower speeds above the limit in urban areas.

When asked about the effectiveness of different police actions, respondents to the survey said they felt violation tickets were an effective response to intersection violations and speeding. Traffic officers tended to view violation tickets as more effective in deterring intersection offences, speeding and occupant restraint infractions than did all other officers.

Half of the respondents to the police survey cited occupant restraint offences as a low or very low priority for enforcement of traffic offences. Traffic officers tended to give all traffic enforcement activities higher ratings and close to half saw seat-belt offences as a high or very high priority to improve road safety and reduce traffic injuries.

The survey showed that of officers with traffic duties, dedicated traffic officers are more likely to issue a violation ticket for traffic offences than all other officers. For example, 79 per cent of officers with traffic duties indicated they would likely issue a ticket for an occupant restraint offence, compared with 36 per cent for all other officers. The difference for aggressive driving offences was 94 per cent versus 76 per cent, and for speeding 95 per cent versus 62 per cent.

Photo Radar/Traffic Cameras

Discussion paper submissions showed that police see photo radar speed enforcement as a tool available to police to deliver traffic services, but that many believe the program is experiencing problems similar to other traffic operations, such as a shortage of staff and equipment and deployment based on poor data.

Several officers said they thought the existing site selection criteria and policies are cumbersome and inflexible and need to be modified. One submission said photo radar is not overly effective in rural areas and suggested shifting some of the ITCU resources to one of the larger highway patrols.

Some submissions suggested that photo radar become part of a larger multi-function unit or be assigned to local traffic units so it could be moved frequently and quickly to address problem areas. One officer contended that photo radar would never achieve its full benefit and broad police acceptance until it is self-funded and free of government interference.

Other submissions called for an increase in the number of vehicles—one suggested doubling, or even tripling, the present 30-van inventory. However, several officers involved with the program noted that the existing equipment sits idle when no trained operational staff is available.

All police submissions in response to the discussion paper stated that police must continue to manage the photo radar program. However, there were differing views on whether civilians could operate the vans. Some officers thought civilians should operate the vans while others worried about issues such as high turnover rates, dealing with angry motorists and the expectation that a trained officer would attend court. Those opposed to civilian operators also pointed out that since police are seconded to the program, a change would not increase the number of officers on the street.

Adding covert deployments and improving the ticketing process were noted in police submissions to the discussion paper as ways to make photo radar more effective, although one submission said it would be unconscionable to hide photo radar equipment at high-crash locations when visible enforcement could prevent a serious crash. Other suggestions included raising the minimum tolerance to 20 km/h and using vehicles other than the easily identified vans for deployment.

The B.C. Federation of Police Officers said photo radar and red-light cameras are effective enforcement tools if used at high-speed or high-crash locations. It also suggested that covert operations and more deployment sites would increase the effectiveness, and saw no reason why B.C. should not introduce stationary speed cameras at high-risk locations.

While the bulk of the police submissions supported photo radar, one retired officer recommended abolishing the program and putting more officers in unmarked cars.

One officer said the Intersection Safety Camera Program provides an excellent example of partnership involving local engineers, police, community group, insurance companies and other stakeholders.

What Works and What's Important?

The survey asked officers to indicate the effectiveness of strategies aimed at improving road safety and reducing injuries, and were invited to add to the list. Most indicated that increased traffic enforcement and public education campaigns were most effective. However, more traffic officers (90 per cent) supported increased enforcement when compared with all other officers (68 per cent). The top three strategies identified by officers to improve road safety and reduce injuries were vehicle impoundment, photo radar/intersection cameras and driver assessment/reassessment.

Several of the discussion paper submissions called on government to develop an education and media campaign to promote the importance of occupant restraints, especially child restraints. Others said police must understand the importance of occupant restraints and issue violation tickets.

Police submissions also identified the need for additional resources to support more road safety education using community police and volunteers. Police also frequently noted the value of public education and awareness in supporting enforcement activities. One officer recommended posting signs at border crossings and near major airports to advise visiting motorists that speeding tickets are at least $115 and seat-belt tickets are $86.

There was overwhelming support for volunteer programs such as Speed Watch, that help to increase community involvement in traffic safety and enhance traffic services.

Almost three-quarters of respondents to the police survey said they viewed intersections as locations rating a high or very high priority for enforcement. More than half of the officers also rated two-lane undivided highways, multi-lane undivided highways and municipal roadways as high or very high priorities. Additional high-priority locations for enforcement added by respondents were school and playground zones, high-collision areas and commuter roads.

Three quarters of respondents to the survey chose holiday long weekends as the highest priority time for traffic enforcement, followed by rush hour, evenings and weekends. Officers added special events, before school/after school and bar closing times as other high-priority times for traffic enforcement.

What Would Police Change?

When asked what legislative actions they would take to improve traffic safety if they had this authority, close to 30 per cent of the survey respondents said they would increase penalties. Respondents also suggested tightening legislation and/or increasing the scope of legislation to include new offences, tightening driver licensing requirements, increasing fines and reducing the "red tape" involved in getting bad drivers off B.C. roads.

Participants in the BCACP traffic safety committee meeting said that if they could do more to improve road safety they would focus on "the worst offenders," such as impaired drivers with outstanding fines or suspended/prohibited drivers. They also said they would like to be able to conduct cross-border investigations and more advanced or technical investigations to pinpoint the cause of crashes.

The BCACP traffic safety committee participants identified the need for more resources—people and equipment—to improve traffic service delivery. They also stated that they would be better equipped to find solutions if they could attend and investigate more crashes.

However, the committee members acknowledged that money alone is not the only way to improve traffic service delivery. They argued that B.C. needs a strategic plan that sets out the role of traffic law enforcement in creating safe communities and emphasizes the value of traffic services. RCMP officers suggested increasing the rank of the officer in charge of "E" Division traffic services.

The TSC focus groups also identified the need for better training, more emphasis on traffic in police orientation, more traffic courts and incentives to encourage officers to consider a career in traffic. The officers said traffic managers need specialized experience and skills related to traffic; they need to be able to set targets that show whether their unit is achieving results.

RCMP members of the Traffic Safety Committee wanted to bring back the district traffic advisory non-commissioned officer positions and municipal officers wanted municipalities to have a greater share of traffic fine revenue to encourage more investment in traffic services. Other themes that arose in the work sessions included the need to simplify paperwork, establish uniformity with statistics, allow certificate evidence in court, end the downloading of extra duties on traffic and ensure traffic tickets are paid.

In response to the discussion paper, one officer recommended making better use of existing resources to improve traffic enforcement through the use of electronic ticket systems that have the potential to be more accurate and faster.

Stakeholder Perceptions and High-Risk Traffic Safety Issues

Police Resources

ICBC's submission in response to the discussion paper addressed what it saw as a dramatic decline recently in police resources directed at road safety, something it says is not equally evident in other areas of police enforcement. ICBC further noted that the toll from traffic crashes (death, injury and property loss) is far greater than that resulting from all other crimes combined.

ICBC said that the special traffic enforcement projects it has funded since 1995 have had a positive effect on crashes and claims, but it expressed concern that the benefits might be threatened by the lack of base traffic services. The corporation made it clear that its role is to enhance, not replace, traffic services, yet it said close to half of all violation tickets issued in 1998 were through ICBC-funded programs. It recommended increasing base traffic service levels to those achieved in the early 1990s.

BCAA told the study it felt police should have enough staff and resources to deliver special enforcement programs, such as CounterAttack and the Targeted Traffic Enforcement Program, as part of regular duties rather than relying on ICBC-funded overtime. BCAA also said it felt that that filling police vacancies to allow full, visible traffic law enforcement would discourage dangerous driving behaviours and increase respect for the law.

SENSE suggested in its submission that if ICBC continues to fund traffic enforcement, this should be done through a general grant under police control with more permanent positions rather than relying on overtime. SENSE recommended transferring all ICBC road safety functions into a publicly accountable road safety organization with legislation requiring that all automobile insurers contribute to it.

ICBC advised the study that the Attorney General and the Minister Responsible for ICBC had agreed to look at a new approach for funding the special enforcement programs. It said this would involve a move from project-by-project contracts with police to a more strategic deployment with multi-year and results-based funding.

ICBC added that this new approach to funding would require a renewed commitment by government and police services to traffic services, and that the special programs would be more closely integrated with base traffic services. It said police and the Attorney General would be clearly responsible for determining and delivering the best traffic enforcement tools and methods consistently across the province, leaving ICBC solely as the funding unit.

A number of submissions also addressed the issue of base funding for traffic services. BCAA, the Union of B.C. Municipalities and the B.C. Association of Police Boards were among those that said improved fine revenue sharing could encourage communities—especially those that pay all their own policing costs—to maintain or increase traffic services. All agreed that community safety, not revenue collection, must continue to remain the priority.

While several stakeholder groups called for less ICBC involvement in enforcement activities, there was broad support for the enhanced programs. The B.C. Association of Police Boards specifically noted that the programs not only improve road safety but they allow local police to build leadership skills in managing local activities and they provide local police with extra funds to buy traffic enforcement equipment.

ICBC's submission in response to the discussion paper pointed out that the corporation would always continue to have a valuable role to play in working with police and the Ministry of

Attorney General to develop best practices, support police with crash data and analysis, provide public education and stakeholder co-ordination on road safety, and work with police and communities on road safety design and improvement initiatives.

Many of the stakeholders felt it was appropriate for ICBC to lead public education and advertising activities while leaving police to manage the enforcement and community relations. There was overwhelming support for volunteer programs such as Speed Watch, which help to increase community involvement in traffic safety and enhance traffic services. UBCM also spoke of the value of the road improvement program where ICBC helps municipalities solve road safety issues through infrastructure improvements.

In its submission, the Youth CounterAttack Road Sense Society of B.C. (CARS) pointed to what it saw as a need to re-energize traffic services in the province, noting that increased officer satisfaction is essential. It also suggested using a model like Ontario's Highway Rangers.

Impaired Driving

BCAA was among the stakeholders that said impaired drivers, especially hard-core offenders, must expect to be charged, convicted and face a tough penalty or they will see no reason to change their behaviour. It added that there is little value in introducing tougher impaired driving sentences when existing maximum sentences are seldom imposed. BCAA told the study that Canadian Attorneys General should send a signal to the judiciary that serious driving offences are a criminal, not a social, issue.

Mothers Against Drunk Driving (MADD) said the B.C. public must see that impaired driving is not tolerated and that anyone driving impaired can expect tough sanctions.

A number of stakeholders also called for mandatory remedial programs for convicted impaired drivers. BCAA and MADD pointed out that B.C. is the only Canadian province without such a program. [23] The Western Brewers Association suggested mandatory assessment for first-time offenders and treatment for those identified as alcohol dependent, in addition to existing penalties.

There was also some support for the use of ignition interlocks among the submissions to the discussion paper. However, Strategies to Reduce Impaired Driving Everywhere (STRIDE) warned that unless interlocks are used effectively they could diminish the deterrent effect of the criminal sanctions.

Most stakeholders indicated strong support for CounterAttack. Several recommended a combination of high-profile roadchecks to maintain public awareness and random roadchecks on less-travelled routes, which are more likely to stop impaired drivers. ICBC said studies show CounterAttack is most effective when the equivalent of 20 per cent of the population passes through a roadcheck within a given month. It suggested expanding CounterAttack to cover all B.C. communities with a population of more than 15,000.

STRIDE said CounterAttack is a great deterrent when the roadblocks are highly visible, well advertised and strategically located in a community. However, it expressed concern that *some* officers may wave vehicles through or issue 24-hour prohibitions to avoid taking a Criminal Code charge to court.

A number of stakeholders raised concerns about the increasing number of 24-hour prohibitions. BCAA suggested police are discouraged by the complex and time-consuming demands required to process a Criminal Code impaired driving charge so it can withstand a court challenge. Rid Roads of Impaired Drivers (RRID) said a study is needed to determine how often impaired driving

[23] B.C. is in the final stages of preparing its remediation program and expects it will be in place by 2001.

charges are dropped or reduced. MADD argued that the reliance on 24-hour prohibitions sends out the wrong message and could actually lead to more impaired driving.
The Ministry of Attorney General's Criminal Justice Branch challenged what it saw as an inference in the study's discussion paper that Crown counsel cannot deal adequately with impaired driving charges. Its submission stated that steps have been taken to ensure Crown counsel have the time, educational support and proper research tools so they can provide effective prosecutorial services. It further stated that there is no empirical data to suggest Crown counsel are staying or reducing charges due to a lack of time or expertise.

The B.C. Ministry of Transportation and Highways suggested processing impaired driving sanctions through special courts or hearings and modifying language or clarifying technical issues to reduce the number of dismissals on technical issues.

Several submissions called for increased training so police are more confident in handling not only impaired driving charges, but also cases where drivers may be impaired by substances other than alcohol. RRID recommended looking at the value of hiring additional officers who could travel throughout the province as needed to support local police in dealing with impaired driving resulting from drugs or alcohol.

A number of stakeholders urged government to look into the possibility of improving roadside screening devices so officers can issue an administrative driving prohibition with a 24-hour prohibition. Several also recommended reducing the threshold for an administration driving prohibition to 50 mg%.

CARS further recommended increasing the 24-hour prohibition to 48 hours and increasing the current 12-hour suspension under graduated licensing. It also suggested an immediate reduction of the legal blood alcohol concentration to .05 per cent with further gradual reductions after the year 2005 until any trace of alcohol results in penalties.

In its submission, the Western Brewers Association said a sentencing system that links the penalty to the level of impairment would deal more effectively with hard-core offenders and address the fact that a higher blood-alcohol level increases the risk of a crash.

Several submissions received in response to the discussion paper said that extra effort is needed to deal with hard-core or repeat offenders. The Western Brewers Association said that according to the Traffic Research Injury Foundation (TIRF), hard-core drinking drivers represent less than three per cent of Canada's driving population, yet account for 84 per cent of all drunk driving occurrences each year.

MADD, however, said this view risks marginalizing the impaired driving problem in Canada. It referred to a study from the U.S. National Highway Traffic Safety Administration, which found that convicted drinking drivers were only slightly over-represented in alcohol-related crashes in California and were not a major cause of the impaired driving problem.

MADD said a large number of social drinkers occasionally drink to excess on special occasions or weekends. It quoted a 1996/97 statistical report where close to one in five Canadians reported drinking five or more drinks at one sitting at least 12 times in the previous year, with a higher percentage for drinkers aged 20 to 24. MADD suggested that the sheer size of this group means it likely is responsible for most alcohol-related crashes and casualties.

MADD's submission also included a copy of its 2000 report card from a study of provincial and territorial impaired driving, victims' rights and insurance legislation and noted that B.C. received a C+ rating, the second-highest grade received in Canada. It noted that the two strongest recommendations for the province are implementation of ignition interlocks and mandatory remediation.

Unsafe Speed/Traffic Cameras

As was the case with many of the public submissions, submissions from stakeholders held varying views about speed enforcement, especially photo radar.

The SENSE submission said discussions about speeding often fail to distinguish between any speed above the posted limit and the point where speed becomes excessive and what it called truly dangerous. SENSE claimed that compliance with speed limits on many B.C. rural highways averages 31 per cent, yet professional engineering standards suggest the safest speed limits are those set at the rate travelled by 85 per cent of all drivers.

BCAA told the study its members want to be assured that B.C. speed limits are appropriate and that some are not too low. It added that many drivers do not believe that speeding causes crashes.

The B.C. Cycling Coalition's submission contended that drivers who speed frequently demonstrate dangerous driving behaviours such as making unsafe lane changes, failing to yield, following too closely or running red lights and stop signs. The submission said the province should have a zero tolerance policy if it wants motorists to heed the posted limit. The Ministry of Transportation and Highways said that speed enforcement should continue to be a high priority because crashes at higher speeds are more serious, but noted that it is speed differential that causes crashes.

SENSE further stated that ICBC studies show drivers involved in fatal crashes involving unsafe speed are often impaired. It called for teams of traffic officers to deliver highly visible enforcement against all offences.

The Motorsports Education Foundation's submission emphasized the need to raise driving standards and to improve driving skills and attitudes. The foundation recommended that government should be more selective in issuing driver licences and that commercial drivers should have even higher standards. It also suggested looking into black box technology as a means of increasing driver responsibility and accountability.

ICBC and SENSE offered slightly different perspectives regarding the Targeted Traffic Enforcement Partnership (TTEP). ICBC said police and the Attorney General might want to consider expanding the program to provide year-round speed and dangerous driving enforcement in all major inter- and intra-urban corridors in B.C. at a rate of about 160 enforcement hours per 100 kilometres. As noted earlier, SENSE suggested transferring TTEP funds into a general grant under police control to support high visibility enforcement against all traffic offences.

Most stakeholders supported photo radar speed enforcement, although a number recommended changes to improve its effectiveness.

BCAA maintained that the technology must be concentrated at sites with a serious crash or high-speed problem. It said that conventional speed enforcement is more effective in slow-speed zones such as school playgrounds. BCAA said that the use of photo radar at what it considers inappropriate slow-speed locations affects both program effectiveness and public support. It also joined a number of stakeholders in calling for some way to reduce the amount of time between the offence and arrival of the violation ticket in the mail.

SENSE called for photo radar to be eliminated, citing what it said were high operating costs and limited effectiveness. SENSE challenged the methodology used to evaluate B.C.'s photo radar program and stated that it saw no visible improvement in fatalities since the time photo radar was implemented.

ICBC said photo radar is more successful in jurisdictions where there is more equipment or a smaller area to cover. ICBC suggested B.C.'s photo radar program would need 67 cameras and 80

vans, with a similar increase in personnel, if it were to be optimized under its current deployment strategy. ICBC's submission went further to suggest that police and the Attorney General consider integrating a variety of traffic camera tools (mobile, fixed and intersection) with more traditional speed enforcement to increase the overall risk of being ticketed.

Several stakeholders, including ICBC, BCAA and the B.C. Association of Police Boards, said there is potential in using civilians to operate photo radar equipment.

In its submission, the Youth CounterAttack Road Sense Society of B.C. (CARS) said it felt that photo radar is too predictable and suggested using more vans in more varied locations, with both overt and covert operations. The B.C. Cycling Coalition called for more locations, an end to publicizing deployment locations and the use of different types of vehicles.

There was a high level of support for red-light cameras; UBCM said red-light running is a huge issue and intersection cameras are welcome. SENSE, however, recommended shifting resources from speed enforcement to create dedicated traffic enforcement units to enforce intersection violations.

Traffic Safety Planning

The B.C. Cycling Coalition's submission said B.C. should develop an overall road safety management system as set out in the Institute of Transportation Engineers Traffic Safety Toolbox, with an upgrade every five years. It said this system would involve a coalition of major agencies and organizations involved in traffic safety with a unified mission statement. The BCCC also submitted that the government should modernize the Motor Vehicle Act so it is easier to understand and interpret, and should set up a standing committee on traffic safety.

The B.C. Ministry of Transportation and Highways also supported the need for a system approach, which would look at how enforcement fits with other safety tools and how it works with sanctions. The ministry said it is developing a traffic management plan for Highway 1 in the Lower Mainland to achieve maximum capacity and safety, and one of the critical elements is emergency response to highway incidents or collisions. It mentioned that technology such as global positioning system (GPS) devices and video recording can support crash investigations.

The B.C. Association of Police Boards called for a more formal process to co-ordinate all the traffic services currently being delivered, something that can show taxpayers and road users that the investment in traffic services is leading to safer roads and safer communities.

The Union of B.C. Municipalities said there is a need to plan communities that offer safe and efficient transportation for all road users, including pedestrians, cyclists, in-line skaters, push scooters, vehicles and even horse-drawn carts or pedicabs.

Commercial Vehicles

BCAA echoed public concerns about the risk passenger vehicles face in sharing the road with large commercial vehicles, some of which may be carrying overweight loads. The B.C. Trucking Association (BCTA) told the study it would welcome more public education to help motor vehicle drivers understand how to share the road with heavy trucking.

The BCTA said it supports both selective traffic enforcement programs and routine enforcement that focuses on key safety concerns such as tires, brakes and steering and driver fatigue. It said it would welcome more random enforcement to encourage operators to maintain equipment in a safe condition at all times. The BCTA also told the study that because police do not attend crashes there is potential to underestimate the number of times driver fatigue is involved.

The trucking association also felt that more commercial vehicle inspectors are needed. It argued the complexity of checking commercial vehicle safety equipment was such that it may be best left with trained civilian inspectors rather than police, although it also felt these inspectors should have the authority to impound vehicles that are substantially below standard.

ICBC reminded the study that it is responsible for commercial vehicle inspection, driver licensing and vehicle registration but did not address these areas as they are outside the mandate of the Traffic Services Study.

Other Issues

Several stakeholders, including BCAA and UBCM, said it is important to ensure all drivers of all ages and at all levels of experience are safe to be on the road. UBCM said graduated licensing would improve driving skills for new drivers but noted that there is no way to reach those who are licensed and need to improve their skills.

Concern was frequently expressed about increasing driver distractions, especially the use of cellular phones while driving. BCCC said B.C. should legislate limits to the use of distracting devices such as dashboard route assistance while operating a motor vehicle, preferably before such devices become available.

BCAA said it is concerned that children are not always properly secured in child restraints and said it would like to continue to run clinics to promote the proper use of restraints. It also recommended that rental car companies provide child restraint systems at no charge.

The Ministry of Transportation and Highways noted that half of Canadian provinces and territories assess demerit points for failure to use occupant restraints and suggested that this would reinforce the seriousness of using this preventative measure.

A number of submissions promoted the importance of public education around traffic safety issues. BCAA, for example, suggested more public awareness so owners understand that they risk having their vehicle impounded if they loan it to an unlicensed or prohibited driver. It also suggested a campaign to increase awareness about the risks of driving after using some over-the-counter medications.

Public Perceptions and High-Risk Traffic Safety Issues

Public View of Road Safety

The study's public opinion poll showed that British Columbians are concerned about traffic safety and believe the average police officer views traffic enforcement as an important part of his or her daily routine.

Two-thirds of those polled said they think that more emphasis on traffic enforcement could translate to a noticeable drop in traffic injuries and deaths, and three-quarters said less emphasis could mean a noticeable increase in casualties.

When asked unprompted to name what they consider is the most important traffic safety issue facing B.C., one in five chose drinking and driving and the same number chose speeding. Others listed poor/careless drivers (six per cent), congestion (six per cent) and improperly following traffic lights (five per cent) as concerns. A total of 31 different issues were identified including young drivers, elderly drivers, new drivers, use of cell phones while driving, cyclists, pedestrians and vehicle maintenance.

When given a list of seven enforcement activities[24] and asked to rank the priority that should be given to each, more than 90 per cent said impaired driving should be a high or very high priority for enforcement—the highest ranking for all the activities, traffic and non-traffic. Two-thirds also felt police should give a high or very high priority to aggressive driving enforcement.

The vast majority of residents feel safe on the road; although less than a third say they feel very safe. Half said their feeling of security has not changed from the past. Those who do not feel as safe say this is due to traffic volume, poor driving skills, speeders and aggressive driving. Those who reported feeling safer said it is a result of better roads, more police enforcement, better vehicle safety and more driver education. Residents of the Fraser Valley and Greater Vancouver and those with more than 20 years of driving experience indicated they are more likely to feel less safe on the road today than in the past.

The poll results showed that British Columbians think careless driving (29 per cent) causes the most crashes, followed by speeding (25 per cent) and impaired driving (22 per cent)

Public View of Police Services

In response to a poll question regarding who should be responsible for photo radar, CounterAttack and conventional speed enforcement, most British Columbians chose local police over local government, ICBC and the provincial government. Most were confident that local police are indeed responsible for these activities, although some that preferred a police lead thought one of the other agencies was in charge. With photo radar, 73 per cent of respondents said they think police should be responsible and 56 per cent think this is the case.

A common theme in the public submissions to the discussion paper was that police enforcement must be motivated by safety, not revenue. Some submissions supported special traffic units and one recommended a special police unit with officers who can attend and analyse all serious-injury or fatal crashes and help to pinpoint the causes.

Other general comments about traffic services included the use of more volunteer programs such as Speed Watch and more enforcement in school zones, at intersections, on weekends and in bad weather. Several submissions claimed police enforce speed limits on straight stretches on a sunny day when they should be concentrating on drivers who tailgate, change lanes unsafely and run red and yellow lights. One recommended random enforcement in residential areas where drivers often run stop signs.

Poll respondents felt that holiday weekends are the most crucial time for traffic law enforcement, followed by weekends, morning and evening rush hour, and periods of bad weather and evenings between 8 p.m. and midnight. Midnight to 5 a.m. and daytime from 10 a.m. to 3 p.m. are seen as the least crucial times for enforcement.

While one discussion paper submission said B.C. traffic services are being eroded and traffic officers are becoming demoralized and overburdened, another said better data is needed to show that the 707 police positions allocated to traffic are justified.

One submission contended that the quality of data collected by police is poor, which means enforcement does not always focus on the key safety concerns. It noted that a recent international traffic records forum discussed, among other things, the use of trained technicians rather than police to record crash data.

[24] Drinking under age, impaired driving, possession of marijuana, investigating break and enter, investigating assault, aggressive driving, failing to wear a seat-belt.

Impaired Driving

Impaired driving is clearly a major road safety concern for British Columbians. The study's public poll found that respondents of all ages, at all levels of driving experiences and in all regions of the province rated it as the top enforcement priority. Regardless of whether poll respondents said they feel safe or not on the roads, they still view impaired driving as an extremely serious issue.

When poll respondents were asked to rate the seriousness of eight traffic safety issues, an overwhelming number (95 per cent) chose impaired driving offences as extremely serious or serious, followed by intersection offences (90 per cent), heavy commercial vehicle offences (86 per cent), aggressive driving (81 per cent), driving without insurance (73 per cent), speeding offences (63 per cent), driving while operating a cellular phone (58 per cent) and seat-belt offences (32 per cent).

The public's concern about impaired driving was also seen in the strong support of CounterAttack in many of the discussion paper submissions. Some recommended a combination of the high-profile roadchecks on main routes and smaller ones on less-travelled roads or rotating roadchecks at the exits of pub parking lots.

Many submissions also stated a need to find some way to allow police to more easily process impaired drivers, such as a roadside screening devices that can support an impaired charge or at least support an administrative driving prohibition.

Several of the public submissions recommended building specific police expertise that can be shared by agencies across the province and more training so officers can confidently deal with impaired driving cases and can also check for drug impairment.

All of the public submissions that referred to impaired driving supported tough enforcement and tough sanctions to deal with drivers who are impaired by alcohol or drugs.

Unsafe Speed/Other Offences/Photo Radar

The issue of speed brought sharply different responses from members of the public. Many of the submissions received as a result of the discussion paper said B.C.'s speed limits are too low and that speed enforcement restricts the majority who are speeding in what they described as a safe and responsible manner.

Yet the public poll found that when asked to identify the most important traffic safety issue facing B.C. today, speeding was cited as frequently as impaired driving. Speeding was also seen as one of the biggest contributing factors to car crashes (25 per cent), just after careless driving (29 per cent) and ahead of impaired driving (22 per cent).

Some discussion paper responses said police should concentrate enforcement on speed that is excessive and others said drivers who obey the limit only risk being tailgated or cut off. One writer argued that more money should be spent putting police cars on the road, both marked and unmarked, and less on "useless tax-grabbing" speed traps. Several remarked that the many changes in speed limits across the province make it confusing for drivers.

Regardless of the position taken, there was general agreement that police must do more to enforce other infractions. One submission suggested that drivers do what they want because they know they will get away with it and another said the lack of enforcement has led drivers to believe that speed and aggressive driving are socially acceptable.

A number of the submissions in response to the discussion paper called for an end to photo radar speed enforcement, with a variety of reasons cited, including too much time passes between the

offence and arrival of the ticket in the mail; it is used too often in areas where drivers speed safely and not at high-crash locations; it is not constitutional because the registered owner is charged; its goal is revenue generation rather than road safety.

There were some concerns expressed about current photo radar operations. One submission said it is used primarily in the daytime and on weekends and claimed most crashes occur late at night or early in the morning. Another contended that photo radar is often not right at high-crash locations because of physical limitations. There were suggestions that advising drivers of photo radar locations or using the equipment at the same time and place frequently reduces its effectiveness.

While one submission said it should make no difference how speeders are caught, others called photo radar enforcement "entrapment," "a highly effective taxation system," "a cash grab by the government" and "undemocratic."

There was more support for civilian operators of photo radar equipment than there was for covert operations. One argued that hidden enforcement, whether police or traffic cameras, meant the aim was revenue rather than safety and another said covert operations would reduce the added benefit of drivers spotting other potential hazards when they are watching for vans.

Driver Skills/Attitudes

Some discussion paper responses claimed poor driver training and a lack of skills cause more problems than drivers exceeding the posted speed limit. They said it is too easy to get a driver's licence in B.C. and that other countries such as Germany have tougher testing and safer drivers as a result. One recommended that drivers be stopped at random and required to spend time with a certified driving instructor who can check their driving skill and comprehension.

More than half of the poll respondents (58 per cent) said the best way to make roads safer is with more public education or by making it harder to get a driver's licence, as opposed to more traffic enforcement activities (39 per cent). Greater Vancouver residents, cyclists and infrequent drivers were among those more likely to support education over enforcement, while Nanaimo/southern Vancouver Island residents and those without a valid driver's licence were among those more likely to select traffic enforcement.

Some of the responses to the discussion paper said people know how to drive but demonstrate a lack of courtesy on the road. While there were calls for campaigns on issues such as courteous driving and safe freeway driving, it was noted that the best way to change attitudes is by ticketing offending drivers. Several people commented that they preferred to drive through the United States than B.C. because the roads and freeways are safer and drivers are more considerate.

There were also calls for police to issue more tickets to all road users, including pedestrians and cyclists, who take chances or disregard laws. Some said that commercial drivers should meet higher standards and that police driving patrol cars must obey traffic laws.

Other Comments/Suggestions

The poll found that 90 per cent of respondents considered intersection offences, such as failing to stop at red lights or stop signs, as extremely serious or somewhat serious issues. Several discussion paper submissions called for more red-light cameras and tougher penalties for drivers who disobey traffic signals, and one recommended stopping traffic in all directions for a second at red lights.

While most of the references to the justice system in the discussion paper responses focused on impaired driving, some suggested that sentences are too lenient for people who injure or kill as a

result of any traffic offence and one recommended specialized Crown counsel to handle traffic violations.

Some of the submissions received from the public said that enforcing seat-belt laws is a waste of police time. One suggested that it would be more effective to reduce insurance or medical claims if unbelted people are injured in a crash.

Some discussion paper submissions called for a study of whether cellular phone use causes crashes and others said drivers should not be allowed to use cell phones while the vehicle is in motion. However, the public poll found that cell phone use while driving was seen as one of the least serious traffic safety issues and the least likely cause of a car crash. One submission said it is illegal to use a handheld telephone while driving in the United Kingdom, and suggested fines and demerit points should apply in B.C. if a driver is caught eating, drinking, applying makeup or using a handheld cellular phone when the vehicle is in motion.

A number of the submissions said poor road design could lead to driver frustration or confusion and result in crashes. Some suggested that there would be less aggressive driving if it were easier for drivers to get around and recommended everything from synchronized lights and higher speeds to more bike lanes to encourage cycling and reduce congestion. One submission called for a greater focus on traffic calming, such as roundabouts instead of stop signs, to change driver behaviour through self-enforcement.

APPENDIX C: SOURCE DOCUMENTS

Ministry of Attorney General, Public Safety and Regulatory Branch, Police Services Division. 2000. *Traffic Services Study Discussion Paper*. British Columbia.

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